

ALL HANDS



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AUGUST 1962



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

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• **FRONT COVER: GROUND WORK**—A twin jet A3J Vigilante all-weather attack bomber is readied for a trip skyward on the flight deck of USS Midway (CVA 41).

• **AT LEFT: OUT FOR LAUNCH**—An A3D Skywarrior of NATRON 5 is spotted on number one catapult as the cat crew prepares for launching during air operations on board attack carrier USS Forrestal (CVA 59).

• **CREDIT:** All photographs published in ALL HANDS are official Department of Defense photos unless otherwise designated.



SLEDDING—Tractor pulls power plant package to site. **Rt:** Reactor core is raised from ship's hold.

SOUTH POLE GETS ATOMIC

FIFTY YEARS TO THE DAY after Roald Amundsen became the first man to reach the South Pole, two nuclear power systems arrived in Antarctica.

One was a prefabricated nuclear power plant, the other an atomic powered automatic weather station.

Some time in March, Navymen of Operation Deep Freeze at the Naval Air Facility, McMurdo Sound, were able to look at the first glow of light generated by McMurdo's \$4.5 million nuclear power plant.

Called PM3A, the plant provides 1500 kilowatts of electrical power for McMurdo. The heart of the plant is a pressurized water reactor containing uranium provided by the Atomic Energy Commission.

PM3A is expected to mark the beginning of an era of unprecedented growth at McMurdo. The power plant should provide enough electrical output to meet the camp's lighting, heating and other electrical needs. It replaces the present diesel-powered generator system.

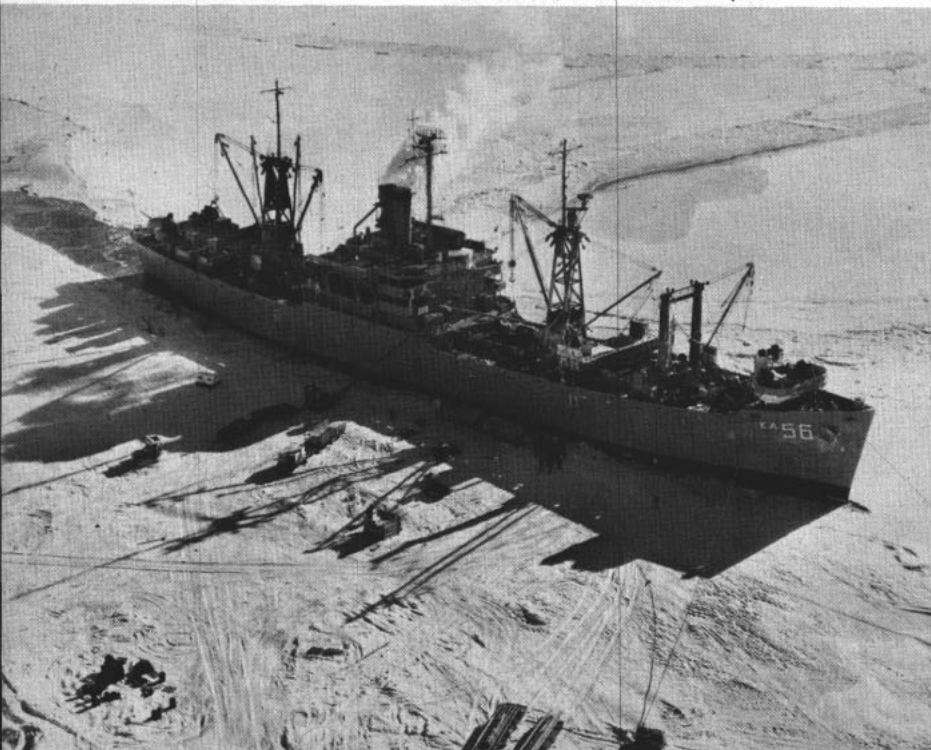
The plant should also ease the logistic problems of supporting activities in the Antarctic, since in the first two years of operation it will supply as much energy as millions of gallons of fuel oil.

In addition, nuclear power can make possible the operation of water distillation and sewage systems in the near future. This will help solve the water problems at McMurdo and provide more comfortable living for the Navymen and scientists stationed there. Until the beginning of its operation, a laborious snow melting process was the only source of water. It should also make life safer (by replacing about half of the oil-fired stoves with space heaters).

The men of Mobile Construction Battalion One did the actual work that transformed the 900-foot Observation Hill of volcanic ash and rock into PM3A's site. When the Deep Freeze summer support season began, personnel of Antarctic Support Activities, one of several Deep Freeze commands, tackled the first phase of the PM3A job—selection and preparation of a site.

Initially, tests were made along Hut Point, an elevated ridge north of the camp area, but this site proved worthless when it was found that the loose volcanic content would not support the plant's weight. Then engineers found solid bedrock a short way beneath the

A COOL CRUISE—USS *Arneb* (AKA 56) delivered components for PM3A.





SEABEES erect new power lines.

POWER

permafrost surface and subsoil of Observation Hill.

The men of ASA began the rough work; blasting a shelf-like cut in the hillside, then clearing and leveling the area. In addition, they had to make a rough niche in the hillside to partially house and shield the heart (the nuclear core) of PM3A. The Navymen who did the initial blasting of the site worked against the hard frozen surface, then had to work their way through several inches of permafrost. This, plus the bedrock beneath, made test cores difficult to obtain. Later, explosives workers were delayed in drilling innumerable holes that were to receive dynamite charges. Initial blasting and cutting saw the removal of 13,000 cubic yards of Antarctic rock. Tons more were removed to finish the site.

In addition to the uncooperative nature of Antarctic terrain, the men had to cope with weather—the cold, windy variety. The Operations Officer of the project estimated that the working efficiency of the Seabees on the job was cut nearly 30 per cent by low temperatures and the necessity for men to wear a relatively great amount of clothing.

It took some 12,000 manhours to rough-prepare the site and a total of 60,000 manhours before PM3A was ready to receive its basic components.

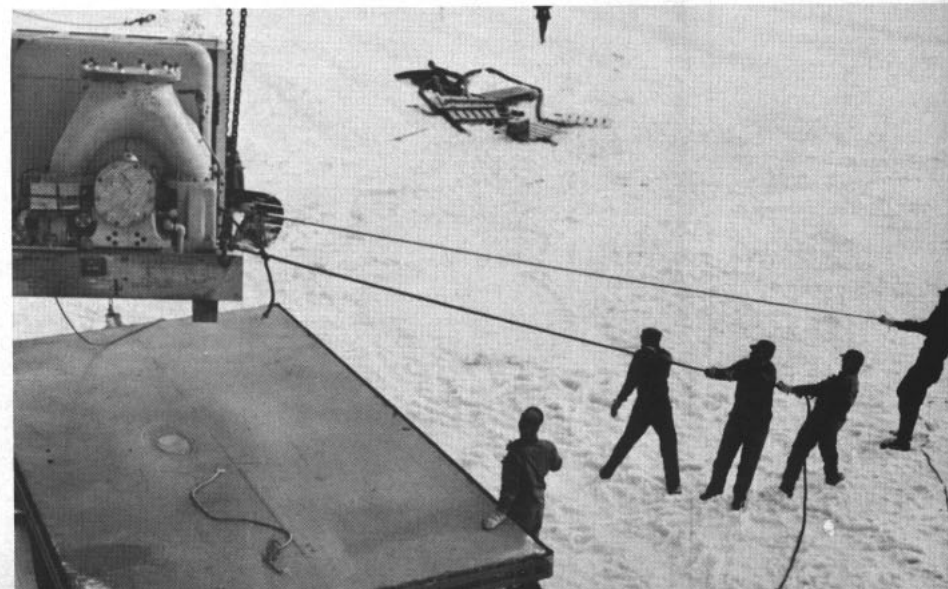
The core itself (which is about the

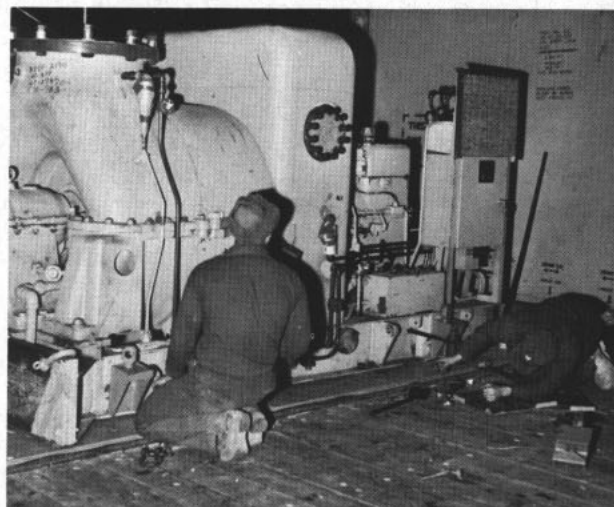
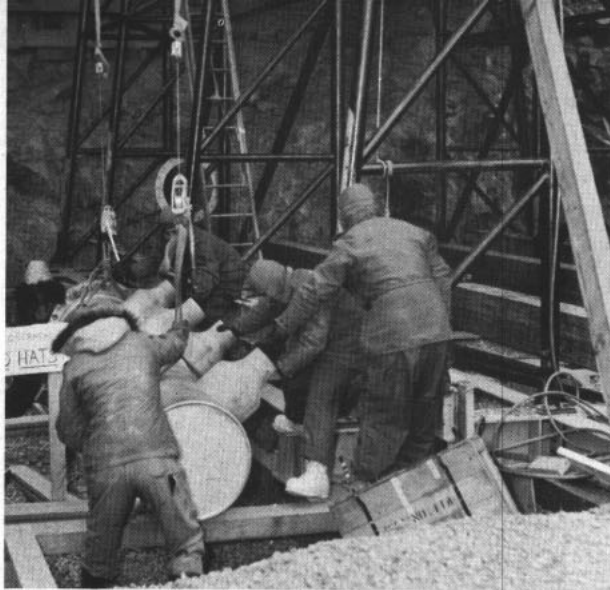


ON LOCATION—Nuclear power plant is located on side of Observation Hill. Below: Pipe for plant's shield cooling system is off-loaded onto sled.

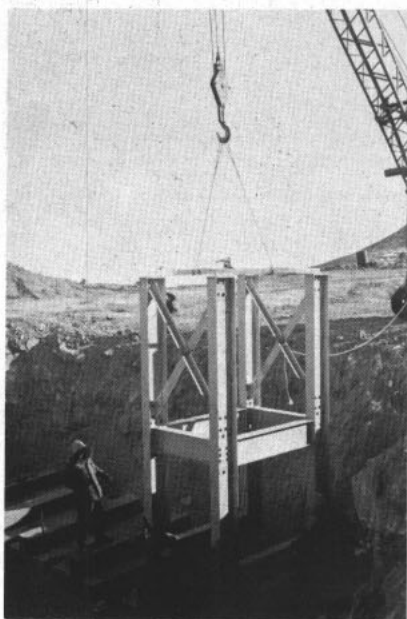


HEAVY DUTY—Steam turbine leaves ship for trip across to power plant.





ON THE SPOT—Parts of shield cooling system and turbine are installed. Below: Generator's steel foundation is placed.



size of a 55-gallon drum) is made up of thin, yard-long, tubular fuel elements — about 740 in all — of highly enriched uranium. These lie in the center of a pressurized water reactor which generates about 10 million watts of thermal energy.

Water heated in the primary system by this nuclear core is pumped under high pressure into the secondary system, where the heat is exchanged and produces steam. This steam in turn powers the 1500-kilowatt generator that produces electricity for the camp.

The primary system stands in vertical tanks under its buildings and falls within the special niche cut in the side of Observation Hill. Additional shielding is provided by crushed rock poured on all sides.

One of the big problems connect-

ed with the project was the transportation of the material and components that formed the plant. The major portion of the foundation and building steel came to McMurdo via ship by March 1961, and was stored near the site over the winter. This gave the project a jump on the schedule for the following summer.

The internal machinery, equipment, hardware and core arrived at McMurdo aboard *uss Arneb* (AKA 56) in mid-December, after *Arneb* followed the icebreaker *uss Glacier* (AGB 4) through the ice. The 50-odd crates and tanks which make up the reactor plant were swung over the side and loaded aboard sleds to be dragged by tractors across the sea ice to the base itself.

The plant is made up of pre-packaged modules, each weighing

DIG THIS—Bad weather hindered the difficult job of cutting foundation into the rocky hillside.





POWER HOUSE—Buildings housing nuclear power plant overlooking McMurdo are of prefabricated steel.

about 15 tons and approximately 30 feet long by eight feet wide. The core is easily replaced and another can be delivered by air whenever necessary. The plant will require refueling only once every two years, if maintained at full power. It has been designed for a useful life of 20 years. Cost of the plant is approximately \$4,500,000.

However, the nuclear power plant will not be the first atomic power device to be used in Antarctica. This distinction will go to a small automatic weather station located near the Little America V base.

Both the midget generator and the prefabricated reactor system were loaded aboard *Arneb* at Davisville, R. I., for the trip south. But the weather station unit arrived ready to operate while the larger

power plant required some 75 days to reassemble.

The weather station generator, which is a finned cylinder only 21 inches in diameter and 19 inches high, requires no moving parts. Heat provided continuously by radioactive pellets at the center of the unit is transformed directly into electricity by thermocouples.

The entire weather station, which takes the place of earlier storage batteries which required replacement every few months, will be buried in the snow. Steel and wooden outriggers will be used to spread the weight and keep the station from sinking. Only a whip antenna and the actual sensing instruments will show on the surface of the Antarctic terrain.

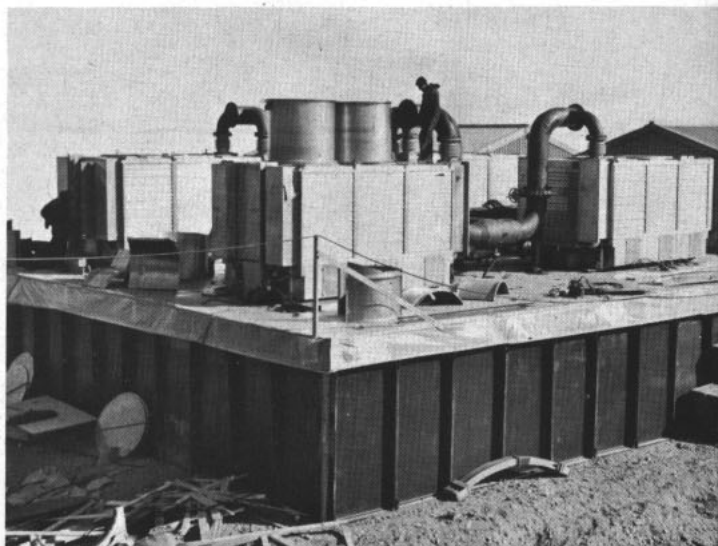
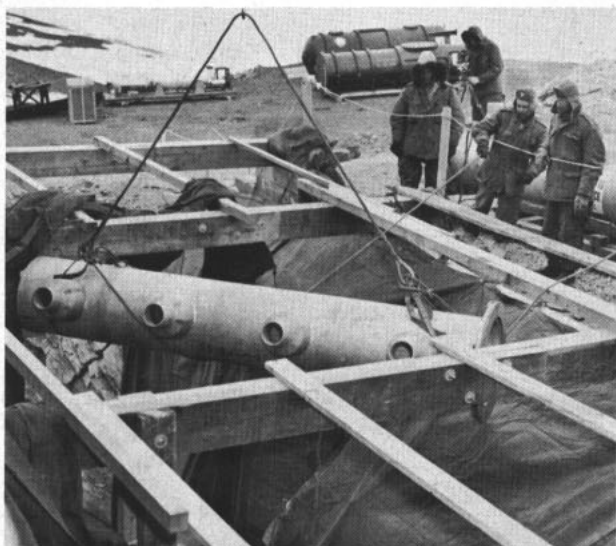
Excess heat from the generator will keep the temperature of the

buried electronic equipment within a constant narrow temperature range, thus avoiding the freeze-up problem which has beset battery-operated stations in the extreme Antarctic cold.

The unmanned weather station is designed to collect temperature readings, barometric pressure, wind direction and wind speed. The information is transmitted in digital form every three hours to the McMurdo Station weather service office 54 miles away, where it is correlated with data from other parts of the Antarctic in preparation of weather forecasts.

If all goes well, this nuclear unit will furnish weather data for Operation Deep Freeze for at least two years without servicing and the plant could go without the need of refueling for as long as 10 years.

PIECE BY PIECE—Prefab parts of power plant are assembled. When together they will put out 1500 kws.





McMurdo's Mechs

KEEPING MOTORIZED equipment working at McMurdo Station in Antarctica is the job of Navy mechanics of Antarctic Support Activities, part of Operation Deep Freeze.

Machines, like the men, work

around the clock. The machines, however, get little if any rest; the men are broken into two shifts of 12 hours each.

Vehicles used here are of infinite variety. There are types designed primarily for use on ice and snow —

weasels of World War II origin, sno-cats with their insect-look and four-tracked pontoons that provide motive power, Canadian "track trucks" of recent design — as well as a variety of more conventional truck vehicles; these latter have been pressed into service to do the heavy construction and hauling jobs of Deep Freeze.

The summer, with its slush-producing temperatures, becomes an ordeal of sorts for those vehicles designed to work in ice and snow. They hug the ground, and continued driving through puddles coats their undersides with a heavy mantle of muddy ice. Before maintenance or repair work can be done, these vehicles must be thawed out indoors.

But thawing out is only one problem. Mechanics find their greatest hindrance in the lack of parts. It is more than 12,000 miles to the United States and warehouses, so often the supply department of McMurdo Station runs short of one part or another that is needed to get a truck or weasel back into working order. Mechanics then take up torch, anvil or welding equipment to fabricate what they need; and their ingenuity under the circumstances is

SNOW CAT needs a little help getting started on cold Deep Freeze morning.



ALL HANDS

largely responsible for keeping the wheels of Deep Freeze going.

There are two garages here — one for heavy diesel equipment, the other for the lighter vehicles that are gasoline powered. Both are heated and lighted to provide as comfortable working conditions as possible at the present time.

But often machines break down in the field — on a rocky hillside, along the rugged roads of the McMurdo Sound area or out on the flat stretches of ice and snow nearby. Then mechanics of ASA must work exposed to the elements. This happens most often during the sunny summer months when the resupply of U. S. Antarctic scientific camps centers on McMurdo Station; thus, weather is not usually a great problem, though at any time of year Antarctic wind and temperatures can make the handling of tools difficult. If shelter is necessary for a job, it may be provided by an impromptu windbreak of parachute cloth to protect the workmen.

During the long winter's night, from March to late September, mechanics completely overhaul every possible piece of equipment from the simplest water pump to the multi-ton tractors of McMurdo. Every available vehicle must be ready to return to work as soon the next summer season begins.

Aside from the big jobs, there are simple but annoying mechanical problems to be faced by mechanics here. Brake linings and the gaskets in their hydraulic systems are sometimes affected by the intense cold. Loss of brake fluid is common, and



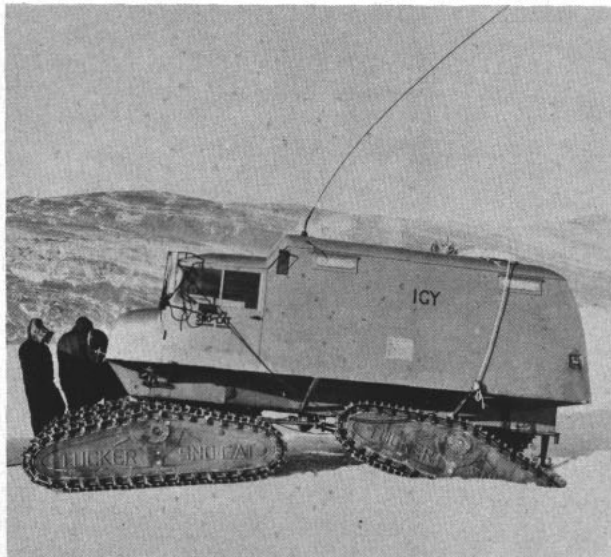
COOL WORK Seabee mechanics install a new engine in ailing tractor.

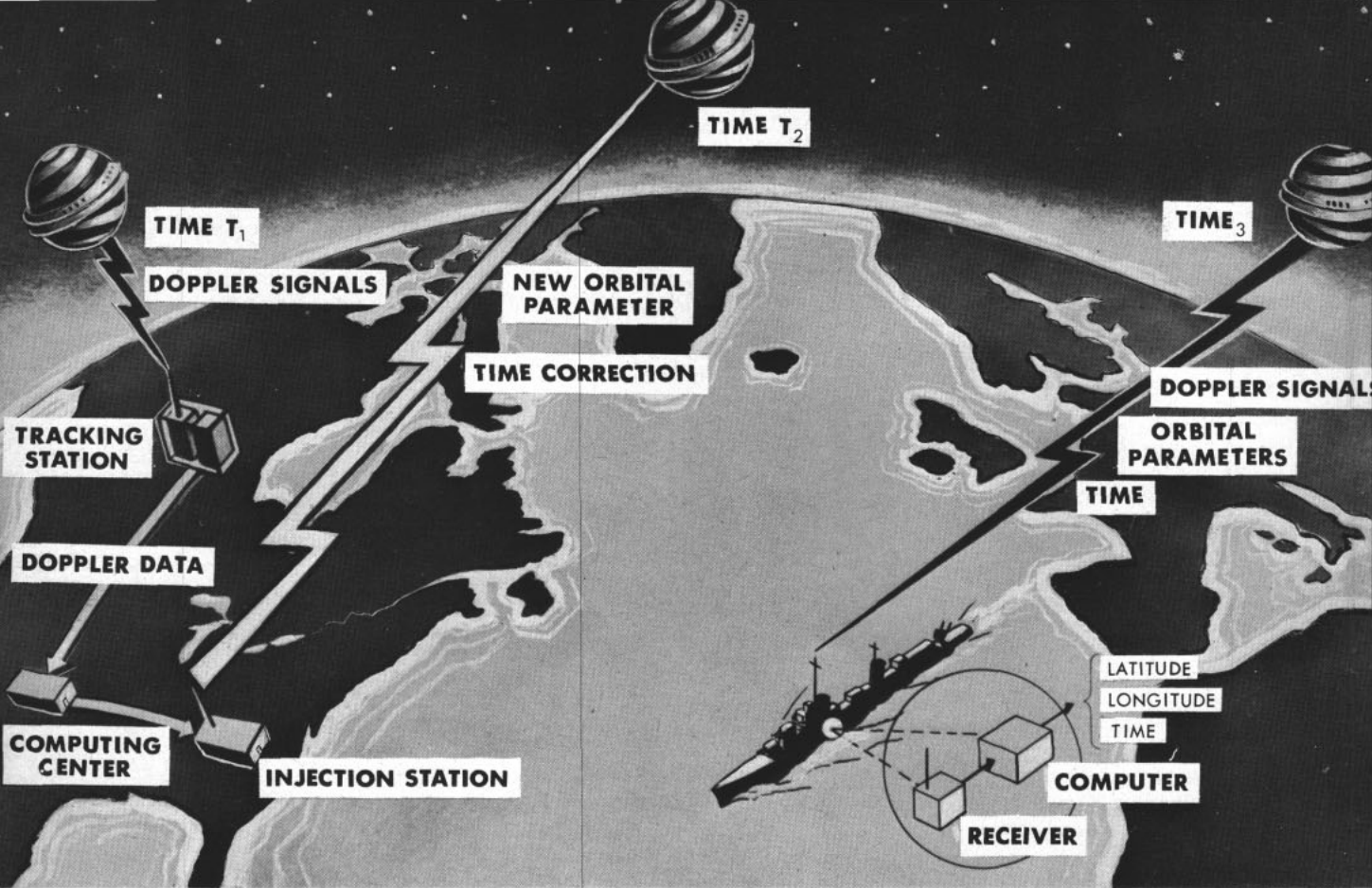
often a parked vehicle, because it was driven through a deep puddle in the summertime, will come up with frozen brakes. The metal and rubber tracks that drive the vehicles designed for snow frequently loosen and are thrown off; these are tedious to replace, especially when the work must be done outdoors in a foot of snow. During the mild late summer, flat tires on trucks sometimes must be changed in ankle-deep mud with the temperature just above freezing. In addition, there is the

year-round necessity to pre-heat engines for an hour or more before starting can be attempted; this pre-heat time is needed to make crank-case oil fluid and warm block and manifolds.

To keep emergency repairs to a minimum, McMurdo garages have adopted a system of preventive maintenance. Each vehicle is inspected at least every 30 to 40 days, checked for operating condition and safety, also tuned up, greased and cleaned of all ice and mud.

ROUGH GOING—Snow cat drops into crevasse and (right) D-8 tractors dig out sled at Little America.





Sailing by Satellite

HEFT A SOFTBALL in your hand. Then imagine a tiny metal cylinder filled with some 95 grams of plutonium-238, imbedded in the core of that ball.

Impressed? You have no special reason for being so—until you learn that two small, white objects only slightly larger than that softball are orbiting the earth this very minute, and that they, along with the capsules of atomic fuel they contain, represent the creation of another space gap of sorts. The gap is in our favor.

These four-and-a-half pound white balls are really thermoelectric generators. Fastened pick-a-back style to the undersides of two of the Navy's currently orbiting *Transit* navigational satellites, they are providing the power to operate some of those two satellites' transmitters. They constitute history's first successful application, by anyone, of nuclear energy as a power supply source in space.

By now you are, we hope, at least mildly interested. To get really excited, though, you have to know

something about navigational satellites, what they'll mean to the Navy, and how the use of nuclear power will help them do a better job.

A still new (and as yet not fully developed) system, navigation by satellite, represents just one example of the continuing push by the Navy to harness space.

Communications satellites will provide rapid, long-range message transmission to U. S. naval forces deployed throughout the world.

THE TRANSIT SYSTEM aims to overcome weather-imposed difficulties—fog and/or starless, overcast skies, for instance—which have plagued navigators for centuries. The *Transit* system is based on interpretation and measurement of a well known phenomenon—the Doppler shift. Literally, this is the apparent shift in radio wave frequency observed when the distance between the source of radiation (in *Transit's* case, the satellite) and the observer (or receiving station) is increasing or decreasing

because of the motion of either or both.

The Doppler principle is an application of relative speed. You've heard doppler many times, but probably didn't know it was called doppler. For instance, when you were stopped at a railroad crossing and listened to the whistle of an express as it approached, you will remember that the note of the whistle was high as the train came near. As the train passed, the pitch of the whistle seemed to drop. And as the express went off into the distance, the pitch of the whistle was low. The change in pitch was doppler.

Application of the Doppler shift measurement technique to *Transit* is by no means that simple, of course—but the theory behind it is strikingly similar.

THE AMOUNT OF SHIFT in either case is proportional to the velocity of approach or recession. Frequency shifts upward as a satellite approaches a receiving station, and

shifts downward as the satellite passes and recedes. The exact amount of this shift depends upon the location of the receiving station with respect to the path of the satellite. With the exact location of the satellite established through transmission of its orbital parameters or location in space, it is possible for an earth receiving station, utilizing measurement of the shift in frequency, to calculate its own exact position.

Accuracy in the *Transit* system is obtained chiefly because of two facts.

First, the quantities measured—frequency and time—are quantities that can be easily established with great accuracy.

Second, the satellite is very precisely restricted by Newton's laws of motion. A satellite is really a small planet, moving precisely under the gravitational pull of the earth. Of all the possible satellite paths permitted by Newton's laws, there is only one which will result in any one particular curve of Doppler shift. Accordingly, from this particular curve the position of a satellite with respect to the receiving station at any one time can be easily and precisely determined.

AN ENTIRE *Transit* operational system consists of five groups of equipment: Several satellites; a network of tracking or receiving stations; a computing center; an injection station; and shipboard navigational receiving equipment.

Here's how it works.

Satellites will travel in polar orbits at the highest altitudes still allowing for accurate tracking—probably around 600 nautical miles up. Tracking stations will receive and record Doppler shifts radiated by each satellite on any pass within receiving range.

This information will be corrected for refraction (the bending effect on radio waves, exerted by the ionosphere) and the resulting Doppler data will then be transmitted to the computing center in digital form. The computing center will use this data to calculate orbital parameters (satellite locations in space corresponding to specific and sequential time increments) of the satellites for at least 24 hours in advance, and will transmit this information to the injection station.

The injection station will transmit all such orbital data to each satellite twice a day as it passes within range. These signals will first erase the satel-

lite's memory tape, then read in new parameters and time correction. Each satellite will retransmit this new data at two minute intervals as modulation of the two stable frequencies.

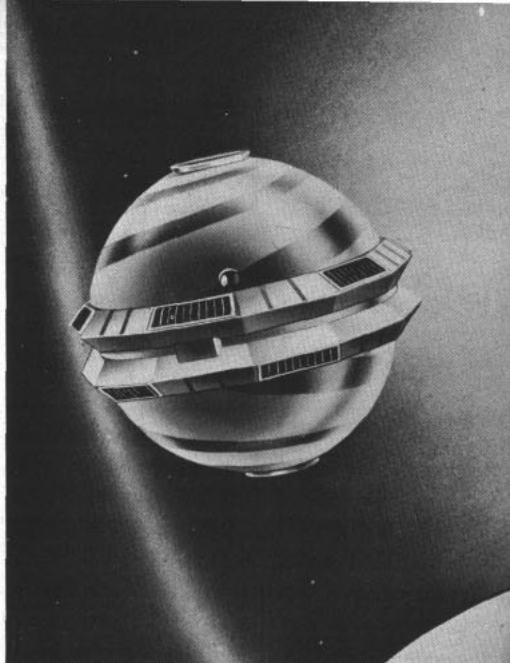
Navigational equipment aboard ships will, in turn, receive and record the Doppler shift of each of the satellite frequencies. It will also record the orbital information transmitted by the satellite. Using all of this data, together with the accurate time signals broadcast by the satellite, the navigator will be able to compute his latitude and longitude as a function of time.

The new system will insure accurate, reliable, 'round-the-clock, *all-weather* navigation—something impossible to achieve with current or previously used methods.

TRANSIT GOT ITS START back in 1958 under the direction of ARPA (Advanced Research Projects Agency). Initial stages of the program under that agency were concerned primarily with establishing feasibility of the system. Then, in May 1960, management of the program was transferred to the Navy's Bureau of Naval Weapons. CNO told BuWeps to "develop a satellite system to provide accurate, all-weather, world-wide navigation for naval surface ships, aircraft and submarines." First steps under BuWeps' auspices included the development of an engineering prototype of the operational system, and of navigational receiving gear.

In the several stages of research and development since that time, BuWeps has put into orbit a total of five experimental satellites as part of the *Transit* program. All of the shots thus far have been launched from Cape Canaveral, but future launchings of the operational vehicles will probably originate from the Pacific Missile Range facilities at Point Arguello, Calif., from whence the satellites will be boosted into polar orbits.

In the fully operational configuration, the *Transit* system will contain a minimum of four satellites circling the globe in evenly spaced (in longitude) polar orbits. With them the Navy expects to be able to guarantee navigational fixes at almost any spot in the world at least once every 108 minutes, and in many locations two to four times as often. Satellite replenishment, either to replace a dying satellite, or to fill a developing gap in world-wide coverage, is expected to require the launching of



ON THE BALL — Striped bands around *Transit-I* act as antenna.

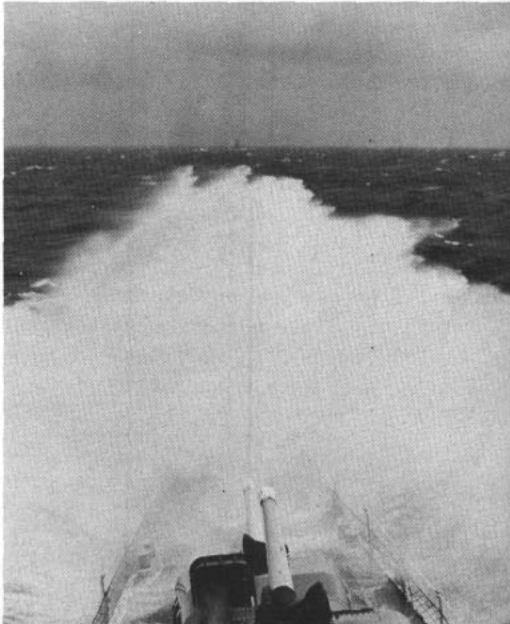
a new vehicle approximately once a year, when a satellite life of five years is achieved.

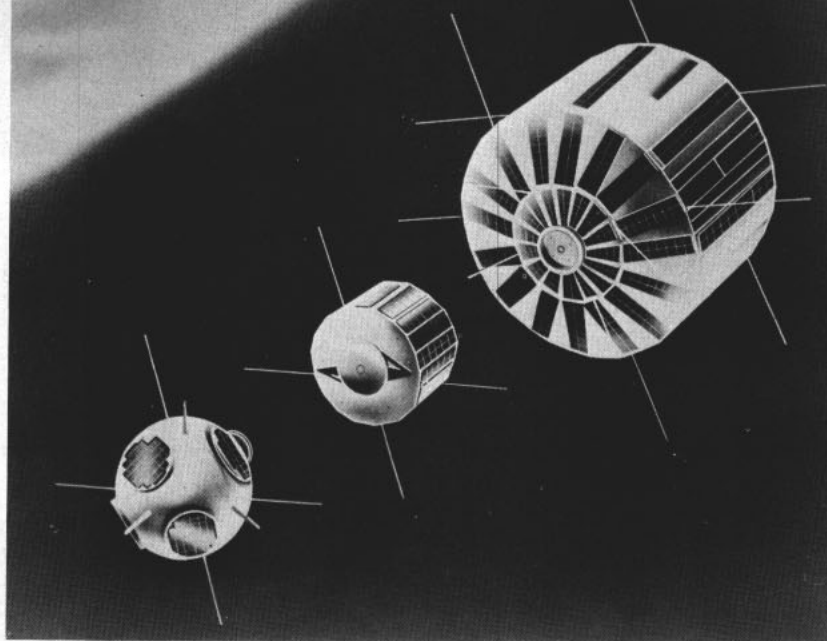
So much, for now, for the *Transit* navigational system and the satellites themselves. What about those little white balls we mentioned back at the beginning of this article?

We've already pointed out that the *Transit* satellites transmit signals continuously as they orbit the earth. It doesn't take an electrical or electronics genius to figure out that the power to operate this transmitting equipment must be furnished by some system of batteries and/or generators.

It is obvious, too, that if the sat-

AT SEA — Satellite system will enable ships to pinpoint their location in any kind of weather.





GOOD GROUP—*Transit IV-A* (rt.) went into orbit with two satellites.

ellite navigational system is to be functional, the satellite's ability to transmit signals must be completely reliable and long lasting.

A design objective for *Transit* satellites is a useful life of five years—a development which will drastically reduce the over-all cost of the program. One recognized problem associated with the attainment of five-year satellite life is the selection of a power source that will provide electrical energy for that period.

This power source, in addition to the obvious requirements of reliable operation over a long period of time, must be lightweight, relatively economical to produce, and readily integrated into the *Transit* satellite design. This may appear to be a tall order or challenge, which in fact it is; however, considerable progress is being made and this problem is by no means an insurmountable one.

THE CONVENTIONAL power source currently incorporated in the *Transit* satellites consists of nickel-cadmium storage batteries and solar cells which charge the batteries when the satellite is in a period of exposure to sunlight. As a measure of progress being made with this type of power supply, it is significant to note that the *Transit 4A* satellite, launched into orbit on 29 Jun 1961, is still transmitting signals which are powered by storage batteries and solar cells.

The satisfactory performance of this power source is past one year, and there are no indications that the end is in sight.

In contrast, a similar, but earlier,

design power supply incorporated in the *Transit 2A* satellite, which was launched on 21 Jun 1960 (or about one year earlier than the 4A satellite), suffered a malfunction after approximately four months in orbit when the nickel cadmium batteries failed as the result of overcharging.

Although significant and gratifying progress is being made in the development of improved storage battery/solar cell type of power supplies, alternate types of power are also being investigated as an integral part of the *Transit* satellite research and development program. Those little white balls containing nuclear power (thermoelectric) for the orbiting *Transit* satellites represent the initial step towards evaluating the present and potential capability of nuclear power as an energy source to sustain the life of *Transit* satellites over a five-year time span.

THE NUCLEAR POWER SUPPLY or SNAP (Systems for Nuclear Auxiliary Power) is a development of the Atomic Energy Commission. The specific application of SNAP units to the *Transit* satellite came into being as the result of joint AEC and Navy studies which concluded that such an application was technically feasible.

In order to prove this feasibility, formal agreements were established between the AEC and Department of Defense whereby the AEC provided two SNAP units (designated SNAP-3A) to the Navy for installation and test as secondary experiments on selected *Transit* satellites.

The results of this joint effort are history; the SNAP-3A units were launched into orbit on the experimental *Transit 4A* and *4B* satellites on 29 Jun 1961 and 15 Nov 1961, respectively. Both units continue to perform satisfactorily, confirming the technical feasibility of utilizing nuclear power supplies in space application.

Following up the initial and signal success of the SNAP-3A program, the AEC and Navy are proceeding on a joint program towards evaluating more powerful SNAP units on *Transit* satellites which will be representative of the operational design in terms of size, weight, thermal balance and power requirements.

The Navy's *Transit* program, although the first user, is not the only space system to which the application of nuclear power is being actively pursued. For this reason, a brief background on the AEC's program for the development of a family of SNAP generators may be helpful at this point.

The AEC initiated their SNAP program in August 1955 in response to a Department of Defense request for a study and limited experimental work toward development of an atomic reactor auxiliary power supply for an Air Force satellite system that had been under study.

As it has evolved since that time, the development of SNAP has branched off into two different forms.

Odd-numbered SNAP projects (SNAP-1, SNAP-3, etc.) have been directed toward the development of compact atomic-electric power packages, utilizing the conversion of radioactive-decay heat to electricity—radioisotope generators similar to the type currently in orbit on *Transit* satellites.

Even-numbered projects (SNAP-2, SNAP-4, etc.), on the other hand, are concerned with the more familiar atomic reactors which convert fission of nuclear materials into power. These SNAP projects have brought forth a whole new technology on the use of nuclear material as a unique and enduring source of power for space, land and underseas applications.

HOWEVER, it is the radioisotope generators—those little white balls again—that we want to talk about here.

Working under a subcontract, a commercial outfit produced a proof-

of-principle model of a radioisotope generator by December 1958. The first demonstration model was fueled with polonium. It produced 2.5 watts of electricity, and was unveiled to the nation by then-President Eisenhower in January 1959 as the "SNAP-3 atomic battery."

For the *Transit* generators, however, the AEC decided to switch to plutonium-238 as its fuel supply.

For one thing, plutonium-238 has a very long half-life (the amount of time it takes for the fuel to drop 50 per cent in its load output of heat) and was therefore considered much more suitable for the five-year design objective for *Transit* satellites. Furthermore, the low radiation levels involved in working with this isotope simplify ground handling and testing.

THE THEORY OF OPERATION of these generators is relatively simple. Here's how it works.

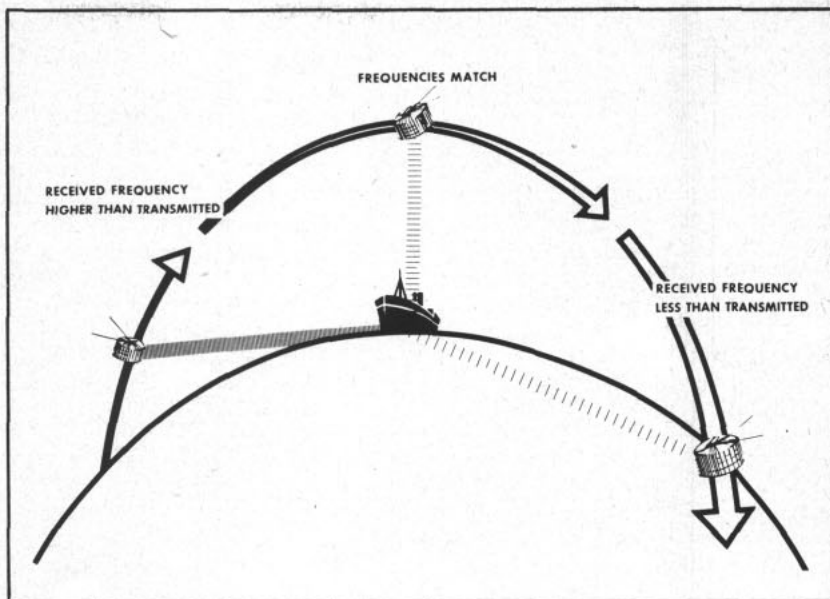
The hot junction of the generator is maintained at a very high temperature through the heating effect of the decaying radioisotope. The temperature at the cold junction, located just inside the outer shell of the generator, is only slightly higher than the temperature of the outer surface, kept relatively cool by radiation of the heat into space. This difference in temperature from the inside to the outside of the generator causes a potential to exist across the thermoelectric elements. Current flows, and power is produced, when a load is connected across the generator terminals.

The generator radiates its heat into space through an outer shell that is coated with a thick thermal covering. This resists absorbing of the sun's rays and maintains the temperature on the outer surface at approximately 200 degrees F. The difference between this and the temperature at the hot junction generates about 2.7 watts of electricity.

Keep in mind, however, if that doesn't sound like an impressive amount, that the generators which have thus far been put into orbit have been experimental models.

Now then, does the idea of very-much-alive radioactive material bugging around in space bug you a little? And what about the possibility of an accident on the launching pad?

YOU NEEDN'T WORRY. In the first place, plutonium-238 is identical chemically to other isotopes of pluto-



DOPPLER EFFECT is illustrated in diagram that shows the change in frequency that occurs as the navigational satellites pass a ship.

onium, but its atomic characteristics are much different. It cannot, for example, support a chain reaction—even in large masses it presents no danger of an atomic explosion.

All forms of plutonium are poisonous if inhaled by living organisms. SNAP safety tests conducted by the AEC to prove the absolute integrity of the tiny metal cores which contain the isotope are among the most elaborate and exhaustive staged anywhere.

AEC has designed these fuel capsules to survive fire, explosion and impact safely, and to burn up in the atmosphere when a satellite ultimately reenters from orbit.

ON EARTH—Navyman checks info received at Point Mugu over the *Transit* Data Transmission system.



The isotope capsules in *Transit* have withstood this type of punishment and to prove their worth, AEC has burned kerosene and nitric acid over them, subjecting them to temperatures as high as 5100 degrees Fahrenheit; exploded 1650 pounds of TNT around them, belting them with shock pressure of approximately 1000 pounds per square inch; and slammed them at high speeds against a granite wall. Even the lowest-grade aluminum core tested withstood this punishment and more.

Since radioisotopic generators are still in the experimental stage, and since the *Transit* satellites' electronic components require more power than the generator alone can supply, *Transit* satellites will continue to rely on the system of storage batteries and solar cells as the primary power source. However, with the current effort on the development of more powerful radioisotope generators, the day may come when these generators will supply all of the necessary electrical power for the *Transit* navigational satellite system.

One thing's certain. If you're involved in navigation in any way, you'll soon be helping to plot courses and establish positions with the help of an unseen satellite. It's a cinch that we and many future generations of Navy men, as well as other mariners the world over, will be affected by the Navy's *Transit* efforts in the field of space-aided navigation.

—Jerry McConnell, JO1, USN.



'YESTERDAY'—Amphibious landing on Pacific island of Peleliu typifies many made during World War II.

BEACHHEAD NAVY

A GLANCE AT ALMOST ANY MAP is sufficient to show that an army marching far enough in a given direction will eventually reach a body of water which must be crossed. When that body of water is crossed, there may be an enemy on the other side—who has to be fought, and defeated.

Down through the centuries, marching armies—some led by ty-

rants, others by liberators—have reached the edges of the ocean.

Alexander the Great, Julius Caesar, William of Normandy, Napoleon, Hitler and a host of others marched their armies to the point where land ended and the sea began.

All found themselves in a position in which their forces took to the water (or they ought to have), reached land after the water was

crossed and fought against an enemy who was secure behind his fortifications, had plenty of ammunition to shoot up and no supply lines to maintain. In short, the invaders' forces had to imitate animals who are as agile in water as on land. They had to become amphibious.

A commander's success was usually measured in his ability to make his forces amphibious. Alexander the Great revealed himself a master at amphibious operations when his ships approached the walls of ancient Tyre, defeated the enemy ships and launched a catapult attack which breached the city's formidable walls.

Julius Caesar landed troops in Britain despite the spears of defending tribesmen and was rewarded with token success. It remained for later Romans, however, to secure the conquest.

William the Conqueror landed his forces in England in September 1066. He established his beachhead in typical Norse fashion and provoked the English King Harold into attacking just a few miles from the

A BEGINNING—Troops hit the beach from Navy boats in 1940 exercise.



ALL HANDS

channel at Hastings. The resulting defeat of King Harold was so significant its effects are felt even today.

Had Napoleon and Hitler possessed the imagination and audacity to launch amphibious attacks against England, there is little doubt history would have been considerably altered, whether or not they succeeded.

THE ALLIES had both the imagination and audacity to launch amphibious attacks in Africa, Europe and the Pacific during World War II, and they won that war largely because of their amphibious ability.

Since amphibious assault is a technique in which the attacker begins his operations on the water, carries the attack to the shore and steps ashore almost literally under the weapons of the defenders, the technique was difficult enough to master in the days of swords and spears. When technology began to complicate warfare, and the attackers found themselves looking down the muzzles of firearms, amphibious assault seemed to be risky to say the least.

In spite of the risk imposed by the technology of the day, the United States employed amphibious assault during the Mexican War in such a way as to serve as a model in later years. Nothing was left to the imagination.

COMMODORE DAVID CONNER landed troops on Sacrificios Island, Mexico (a few miles from Vera Cruz) in 1847. The organization of the landing was excellent and the operation went off like clockwork.

Because of unexpected political developments in Mexico, the landing was unopposed. However, had it been opposed, it would almost certainly have encountered the same success it met under the circumstances.

During World War I, the British decided upon an amphibious attack against an entrenched enemy. The place was the Gallipoli Peninsula on the Dardanelles. The object was to take Constantinople. The attack failed for a number of reasons, one of which was a complete lack of surprise. The long range effect of this failure was to place the technique of amphibious assault in considerable disrepute in subsequent military thinking.

Although there was scarcely a government in the world willing to



'TODAY'—Seabees' heavy equipment rolls ashore during a practice landing.

spend any money on the development of amphibious forces following World War I, there were quite a few people in the United States Navy and Marine Corps thinking about amphibious techniques and developing theories.

IN 1927, THESE THEORIES were given a workout with the U.S. Marines in Nicaragua. The Leathernecks employed lightly armed, small-unit infantry teams which became the model upon which the Corps built its amphibious assault forces in World War II.

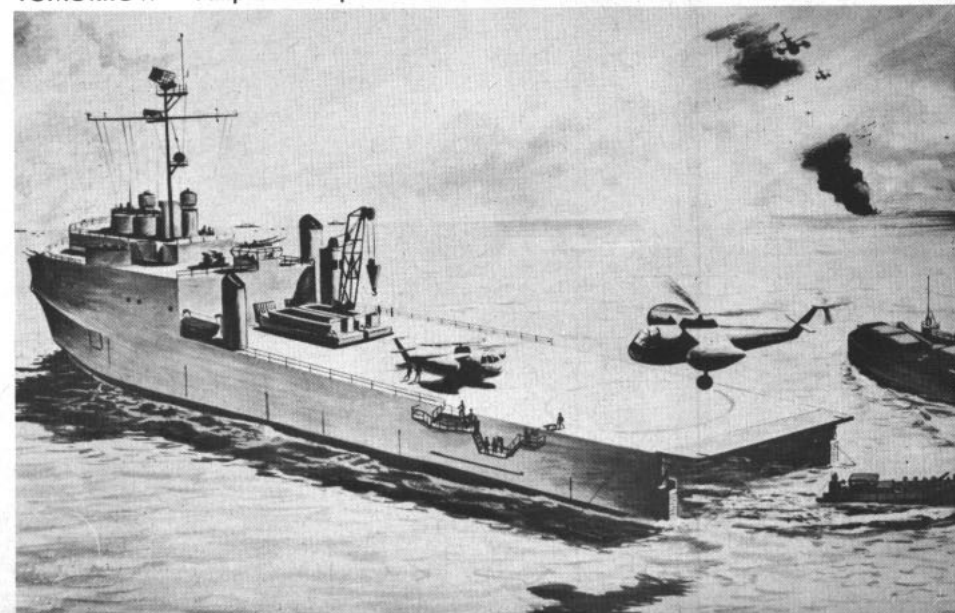
In Nicaragua, the Marines learned the value of close cooperation between ground and air elements.

Guerrillas were spotted from the air; ground patrols were warned of their presence and were able to wipe out would-be ambushers. There were also times when air bombing and strafing helped ground units dispose of numerically superior guerrillas.

It was Marine experience in Nicaragua, together with an extensive use of published works and directives, plus heavy reliance upon 40 years of amphibious experimentation by the naval service, which resulted in the 1934 publication of the Marine Corps' *Tentative Manual for Landing Operations*.

The authors of this manual divided amphibious doctrine into six elements—command relationships, naval gun-

'TOMORROW'—Amphib transport dock combines functions of AKA and APA.





UP AND AT 'EM—Marines board helicopters on flight deck of carrier to make vertical envelopment of 'enemy' during amphibious maneuvers.

fire support, aerial support, ship-to-shore movement, securing the beach-head and logistics.

IT WASN'T UNTIL FEBRUARY 1942, however, that the amphibious forces were really in business. This was when President Roosevelt, after deliberation with Prime Minister Churchill and a hand-picked staff of advisors, ordered the Atlantic and Pacific Fleets to create amphibious forces in each Fleet capable of landing troops anywhere in the world.

It was appropriate that Winston Churchill should be a party to the United States entry into the amphibious field, because he was one of

the few statesmen in the west who, after Gallipoli, still believed amphibious operations could be employed to advantage. It might also be noted the Japanese were conducting some rather successful amphibious operations in the Pacific during the early stages of the war.

It was not until well along in the war that President Roosevelt revealed the development of an amphibious landing craft. He termed it a "wholly new type of ship we didn't dream of two years and a half ago."

The new ship turned out to be a flat-bottomed, motor-propelled vessel which would carry landing troops to

NEW LOOK—New Navy landing craft with retractable hydrofoil takes a test run. The LCV(P)(H) is capable of speeds in excess of 35 knots.



the shore at a medium speed. It was capable of transporting weapons simultaneously or, at least, getting them on the beach soon after personnel. Its effect was to free invading forces from the immediate necessity for port facilities and to place them on a more nearly equal footing with the dug-in defenders.

ONE OF THE LARGEST and first of the new landing craft to be developed was the LST (Landing Ship Tank) which was also called, with something less than affection, the "large slow target."

It displaced 5500 tons when loaded, and it could carry AA equipment, tanks, trucks, bulldozers and other heavy machines. Such a craft could, if need be, transport a landing force from an American port to any overseas landing beach.

The next development in landing craft was the LSM (Landing Ship Medium) which was first used in the Normandy landings. It was designed to complement the LCI (Landing Craft Infantry) and put tanks ashore immediately following the infantry.

Also evolved about this time was the LCT (Landing Craft Tank), a highly maneuverable corvette-sized craft of shallow draft, capable of transoceanic navigation.

Other major landing craft making their appearance in this era were the LCV(P) (Landing Craft, Vehicle, Personnel) and the LCV (Landing Craft, Vehicle) used for transporting infantry and small vehicles, such as jeeps and light tanks, from ship to shore.

The LCM(3) (Landing Craft, Mechanized—Mark III) was used to land bulldozers, medium tanks and other equipment in this weight class.

In addition to these landing craft, truly amphibious vehicles were developed, such as the LVT (Landing Vehicle, Tracked), which was made in both armored and unarmored versions.

There was also the DUKW which had no fluke-like tracks or treads to propel it in the water, as did the LVTs. Rather, it traversed the land on wheels and was screw-propelled in water.

IN THE PACIFIC, the Japanese had planned a war of attrition by placing heavily fortified positions on key islands, thus expecting to make the cost of taking the islands (which they had no hope of keeping in-



LEBANON LANDING—Fast-moving amphibious forces have stopped many a flare-up in the Cold War.

definitely) so high the American public would demand peace.

These plans were defeated by the system of island hopping adopted by the United States forces, which had learned that "hitting the enemy where he ain't is about as important as hitting him where he is."

There were some islands which could not be bypassed. Tarawa was one of them. A combination of winds, currents and tides (the phenomenon known as "dodging tides") had shallowed the water covering the offshore coral reefs to such an extent that even landing craft could not clear them. Troops had to be transferred to tracked landing vehicles to continue the trip to the beach, where a sea wall caused a great deal of additional trouble. The element of surprise, upon which amphibious operations depend heavily, was completely lost.

One lesson learned at Tarawa which had a bearing on amphibious forces, was that natural phenomena and other obstacles could sometimes be as formidable as enemy fortifications. After this, Navy frogmen were used extensively to scout the approaches of Navy landing craft.

Another lesson re-emphasized the importance of having enough naval gunfire support on hand to do the job.

The landings of Allied troops in North Africa, Sicily and Italy are more or less familiar history. Many of the lessons here were learned by the Germans and Italians, who

underestimated the Allies' ability to land when and where they did.

THE GREAT NORMANDY beachhead was something the world had never seen before nor is it likely to see anything exactly like it again. Although large concentrations of manpower may still be necessary to defeat an enemy in the nuclear age, landing operations now require different phasing.

From an organization which, for all practical purposes sprang into existence during the Second World War, the amphibians have developed into a force in readiness which is ever present. Their most memorable exploit since World War II was the landing at Inchon.

In 1958, the Navy and Marine Corps function was defined in part as organizing and equipping forces to conduct prompt and sustained

operations at sea. Amphibious forces fit into this. During peacetime, they can keep a potential enemy from acquiring more territory and can help bolster friendly governments against subversion from within.

AMPHIBS HAVE SEVERAL distinct advantages. Needing no foreign bases, they are "rent free" and can be deployed off any potential trouble spot without committing the United States either militarily or politically.

Amphibious forces carry their assault equipment with them, thus making long supply lines less important. Their composition can be varied to provide balanced fighting units in any tactical situation, and they can draw from all parts of the Fleet without detracting from the Fleet's ability to cope with a general war situation.

When tactical atomic weapons

AMPHIBIOUS Assault ship USS Valley Forge (LPH 8) cruises Pacific.



came into being, many thought the death knell of amphibious forces had been tolled. To be sure, nuclear weapons presented difficulties but, in the end, tactics were developed which, like a lever and fulcrum, turned the weight of nuclear weapons to the advantage of the amphibious forces.

One of the latest developments in amphibious warfare is the concept of vertical envelopment, in which helicopter-borne Marines land behind enemy fortifications on the beach to give the enemy that surrounded feeling which became so familiar to American jungle fighters during World War II.

Helicopter-borne forces can also be landed in small groups; assemble; conduct anti-guerrilla operations, disperse quickly and regroup.

THE CONCEPT OF vertical envelopment has given birth to a new type of amphibious vessel—the amphibious assault ship. It can operate as many as 30 helicopters and carries up to 2000 troops, plus 81,000 cubic feet of cargo, for which it has the most modern equipment for rapid unloading.

USS *Iwo Jima* (LPH 2) was the first ship to be built from the keel up as an amphibious assault ship. Heretofore, *Essex* class aircraft carriers had been converted to serve the purpose. *Iwo Jima* is capable of a speed of 20 knots, which is the minimum speed at which the amphibious forces aim.

Underwater demolition teams, used since Tarawa to scout sub-surface approaches for landing craft, have been expanded to include units which are specialists in covert anti-guerrilla operations.

There are, in addition, the old reliable standbys who are necessary to make an amphibious operation a success—such as the Seabees, causeway tender units and other personnel necessary to prepare a beachhead for fast unloading once the assault phase is over.

DEVELOPMENT OF NEW AMPHIBIOUS craft has not been static since the Second World War. In addition to *Iwo Jima* and her sister ships, other type vessels are either in production, soon to be produced or in the experimental stage.

Some use the principles of the hydrofoil and hydrokeel and employ exotic methods of propulsion. Others are true amphibians which operate on land as well as on the water. The result will be greater safety to personnel, and the development of vessels and vehicles which can carry heavy payloads at high speeds anywhere.

There is no doubt that the amphibians are an alive organization. A quick review of headline highlights during the last 20 years makes this apparent.

What one doesn't always realize after the headlines are read is that these forces, which are constantly exercising and on the alert within striking distance of the world's trouble spots, are potential indigestion to any would-be conqueror who would nibble the free world to death.

The news since World War II is replete with stories of crises which have not been permitted to develop, because of the active intervention of amphibious forces. It is interesting to speculate on how many other crises did not come to a head simply because amphibious forces were nearby.

—Robert Neil.

BIG JOB AHEAD—LCIs move across English Channel for D-Day invasion of the coast of Normandy.





GOOD TIMES — Orphans get sweet treats and cartoons during visit.

Road to Rangoon

STANDING MAJESTICALLY in the early morning light is the Shwe Dagon Pagoda. Its towering spire of gold reaches 326 feet above the ground.

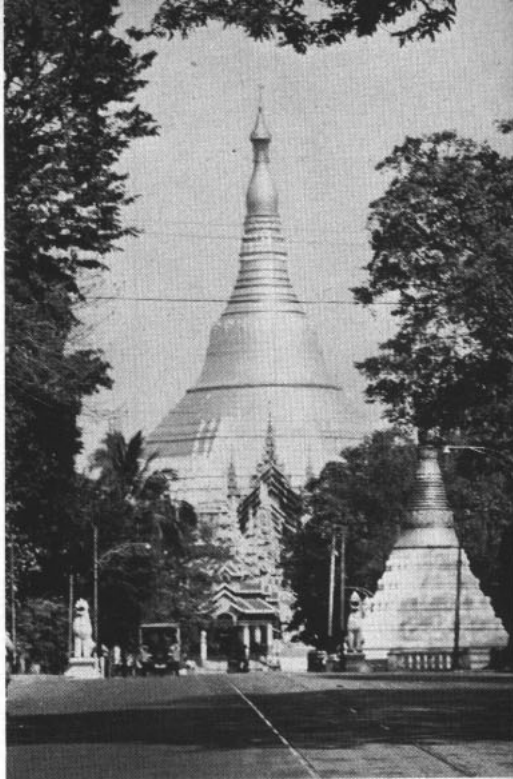
This was the first sight the American sailors on board *USS Higbee* (DDR 86) saw as they neared Rangoon, Burma, and the Seventh Fleet destroyer made port for a four-day good will visit.

The Shwe Dagon has been a famous attraction for tourists ever since its construction more than 2500 years ago. It is said that sealed in the center of the pagoda are relics of Buddha. It was apparent at first sight, as *Higbee* made her way against the strong current of the Rangoon River, that the picturesque city would make a most interesting liberty port. It was the first trip to Rangoon for all hands and the de-

stroyermen were eager to grab their cameras and see the sights.

The Navymen aimed their cameras at such Far Eastern wonders as the Shwe Dagon and Sule Pagoda, the latter according to legend was built to enshrine a hair from Buddha's head.

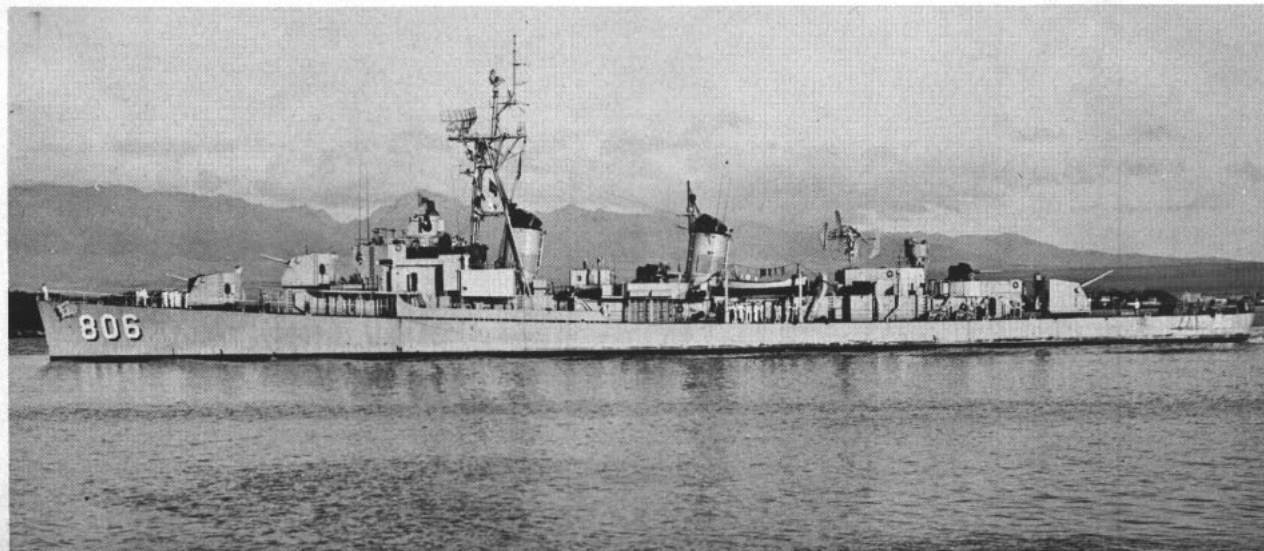
During *USS Higbee's* four-day stay more than 10,000 visitors toured the destroyer. Some waited hours for the opportunity. As they toured the ship, crew members acted as guides, explaining the functions of the destroyer and the part it plays with the U.S. Seventh Fleet. Among the visitors were members of foreign diplomatic corps and their families, Boy and Girl Scouts, orphans, Buddhist monks and civic and military leaders, as well as the general public.



GOLDEN VIEW — Spire of Shwe Dagon Pagoda was target for many cameras during visit to Rangoon.



DESTROYERMEN of *USS Higbee* made new friends in Burma. Above: Native dancers greet Navy visitors.





A NEW ONE—USS *Iwo Jima* (LPH 2) is first to be built from keel up as an amphibious assault ship.

Vertical Envelopment

THE VERTICAL ENVELOPMENT arm of the Pacific Fleet has been beefed up by the amphibious assault ships USS *Valley Forge* and *Iwo Jima*. Both ships were recently assigned to the Pacific Amphibious Force, which is headquartered in San Diego, Calif. *Iwo Jima* operates out of San Diego; *Valley Forge* is based in Long Beach,

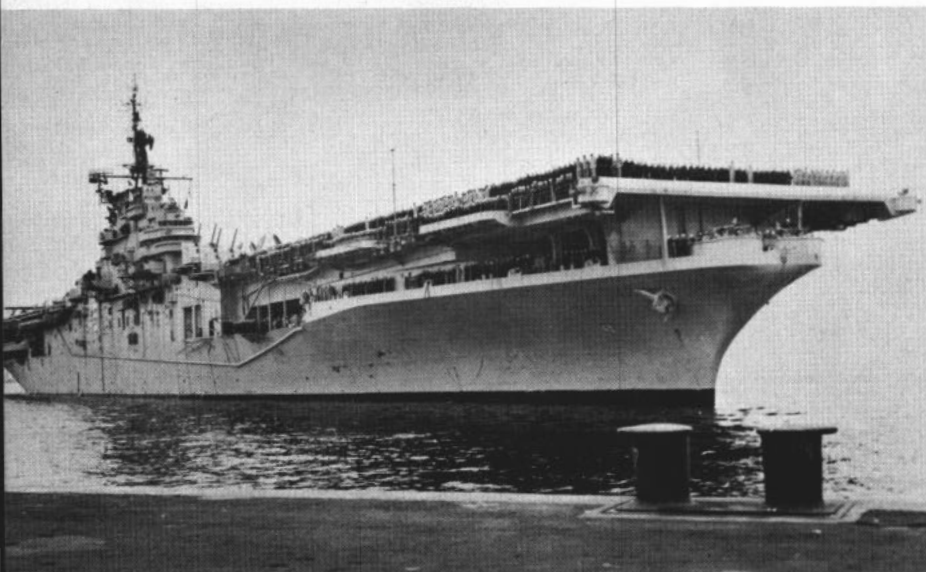
joining USS *Princeton* (LPH 5), a onetime *Essex*-class CVS which has been operating with PHIBPAC for more than three years.

Iwo Jima and *Valley Forge* brought new muscle to the Pacific. *Iwo Jima* is a new ship; *Valley Forge*, like *Princeton*, is an oldtimer with a new look.

Iwo Jima, commissioned in Bremerton, Wash., last August, is the Navy's first ship constructed from the keel up as an LPH. It has been said she represents the total of Navy progress in the development of the tools and techniques of vertical envelopment.

Iwo Jima is well fitted for her role.

NEW DUTY—USS *Valley Forge* has joined PHIBPAC as an LPH. Rt.: Copters from LPH 8 make landing ashore.



Amphib Assault Ships

Amphibious assault ships which handle the transport helicopters developed in recent years are the backbone of the concept in amphibious assault known as vertical envelopment. The idea of vertical envelopment is to augment the over-the-beach amphibious assault forces with Marines flown by helicopters to the rear and flanks of enemy strongholds. This results in the complete "envelopment" of the enemy forces.

Vertical envelopment operations can be handled by amphibious assault ships like the Pacific Fleet's *uss Iwo Jima* (LPH 2), *Princeton* (LPH 5) and *Valley Forge* (LPH 8). These ships carry as many as 40 transport-type whirlybirds and 2000 battle-ready Marines.

She can carry 30 to 40 troop helicopters, and has sufficient berthing and messing facilities for 2000 Marines. (For a transport, *Iwo Jima's* troop compartments are unusual. Hi-fi music is piped to each; bunks have individual reading lights.) The quarters have been carefully engineered for comfort, speed and efficiency, with special rooms for stowing barracks bags and extra wide passageways for equipment laden troops.

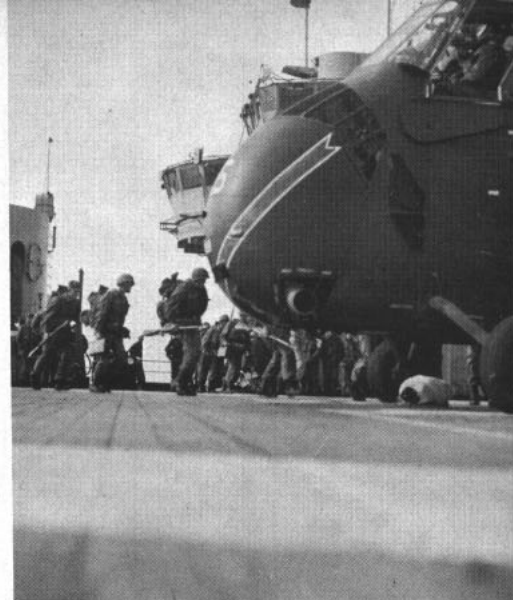
The normal working complement of *Iwo Jima* numbers about 565; 60 officers and 505 enlisted men.

One of *Iwo Jima's* first functions

as an active Fleet unit was a show cruise off California, during which she displayed her capabilities to 100 San Diego citizens. Helicopters sped combat-equipped troops and supplies from the ship to "battle" zones behind a simulated beachhead. One of the observers was Lieutenant General Harry Schmidt, USMC (Ret.), who commanded the three Marine divisions which assaulted the island of Iwo Jima during one of the World War II's most sanguinary battles. The ship's name commemorates that battle.

Valley Forge, named for the Revolutionary War winter encampment in Pennsylvania, is a "makeshift" LPH. She was originally commissioned an *Essex*-class carrier (CVS 45) in 1946. *Valley Forge* was a Pacific regular from 1948 through the action years of Korea, after which she was assigned to duty in the Atlantic. Her conversion to LPH was completed in Norfolk, Va., last July. The ship can carry 1650 troops and 40 helicopters.

At all times either *Princeton*, *Valley Forge*, or *Iwo Jima* is on station in the Western Pacific, ready for action with the 7th Fleet. The LPH is the backbone of a Special Landing Force which includes an APA and an LSD, both of which are also loaded with battle-ready Marines and their equipment. The recent Communist threat to Thailand brought *Valley Forge* with an APA, *uss Navarro*, and an LSD, *uss Point Defiance* into Bangkok where Marines of the Special Landing Force Afloat were put ashore.



PHIBPAC has increased strength with the assignment of amphibious assault ships *USS Iwo Jima* and *USS Valley Forge* to the force.



OFF THEY GO—Troops on board *Valley Forge* and *Iwo Jima* board copters to land behind shore line.



MEET THE 'ACDUTRA

A PAPER NAVY, manned by phantom Naval Reservists, was put into action recently by members of Reserve Mobilization Team 3-8, Freeport, N.Y., as they took part in their annual ACDUTRA—active duty for training.

The Mobilization Team, training at the New York Naval Shipyard, conducted mock mobilization exercises that completely staffed an invisible Navy with invisible Reservists.

Imaginary cruisers, aircraft carriers, hospitals, jet fighters—even a shore patrol unit—were manned by Reservists who weren't really there. The make-believe mobilization was a test of actual call-up procedures that would be carried out in the event of war or other national emergency. The Reservists, backed by naval district headquarters personnel and complex electronic computers, were participating in an exercise that was part of a district-wide conference on mobilization. At the end of the two-week period, the paper Navy drifted into mothballs, and the Mobilization Team returned home.

At just about the same time, quite a different type of ACDUTRA was being performed at the U.S. Naval Training Device Center, Port Wash-

ington, N.Y. Here, RADM James D. Hardy, USNR, had reported in for two weeks of training. In the event of mobilization, RADM Hardy is scheduled to become the director of the Training Device Center.

Key technical and administrative personnel briefed the admiral on major training development projects and the supporting research program. During his two-week tour at the Center, RADM Hardy presented an illustrated lecture, "Acceleration Problems in Astronaut Training," in which he described many of the space research studies conducted on the human centrifuge.

Fifty-six men from varied walks of life left their homes not long ago to report on board the heavy attack carrier, USS *Independence* (CVA 62). They were the officers and men of a Naval Reserve training unit, Surface Battalion 4-6, Harrisburg, Pa.

These 11 officers and 45 enlisted Reservists were taking part in still another type of ACDUTRA. Usually, the men of this unit are assigned in groups of two and three to various Naval Reserve ships for their ACDUTRA. This year, however, they were given permission to train together on board a carrier if they could get enough volunteers. William

F. Hornung, IC2, USNR, expressed his conviction that training on board the carrier gives a better insight into the billets the Reservists might fill. "On the carrier there is more modern equipment than on smaller ships. We have equipment at the training center which gives us the basic fundamentals for our job. And on board a carrier, such as *Independence*, we can really put these fundamentals to use in expanding our knowledge of up-to-date Navy equipment."

There's a pretty good chance that your ship or station has had a hand in training Reservists such as those just mentioned.

What's this ACDUTRA all about? Reservists who are affiliated with drilling units train regularly—some of them drill one night a week, others drill one weekend a month. Once a year many of them have the opportunity to put to practical use the training they received during the year. This is ACDUTRA.

All officers and enlisted men attached to—or associated in a pay status with—units of the Selected Reserve are required to take part in ACDUTRA. Other Reservists on inactive duty may perform ACDUTRA within the numerical, rank and pay grade structure limitations which are established each year by the Chief of Naval Personnel. First consideration is given to Reservists holding mobilization assignments and to junior officers with a mobilization potential for Fleet augmentation assignments.

Not all ACDUTRA is performed by old-timers. Each year thousands of recruits complete their ACDUTRA at the recruit training commands. NTC Great Lakes, Ill., for example, trains about 15,000 Reservist recruits every year. The biggest surge of recruits comes during June and July. Easter ranks next in popularity. Other Reserve recruits—many of them high school or college students—make use of Thanksgiving and Christmas holidays to take part in ACDUTRA.

The recruit trainees get a taste of Navy life as they study seamanship, damage control, fire fighting, and so on. They fire small arms, and compete in athletics and drills. Before they leave the training center, they

ON THE JOB—Airmen D. L. Barron (left) and J. R. Steinfelt of Naval Air Reserve Squadron VS-876 get ready to start engines of S2F Tracker.



ALL HANDS

SAILOR'

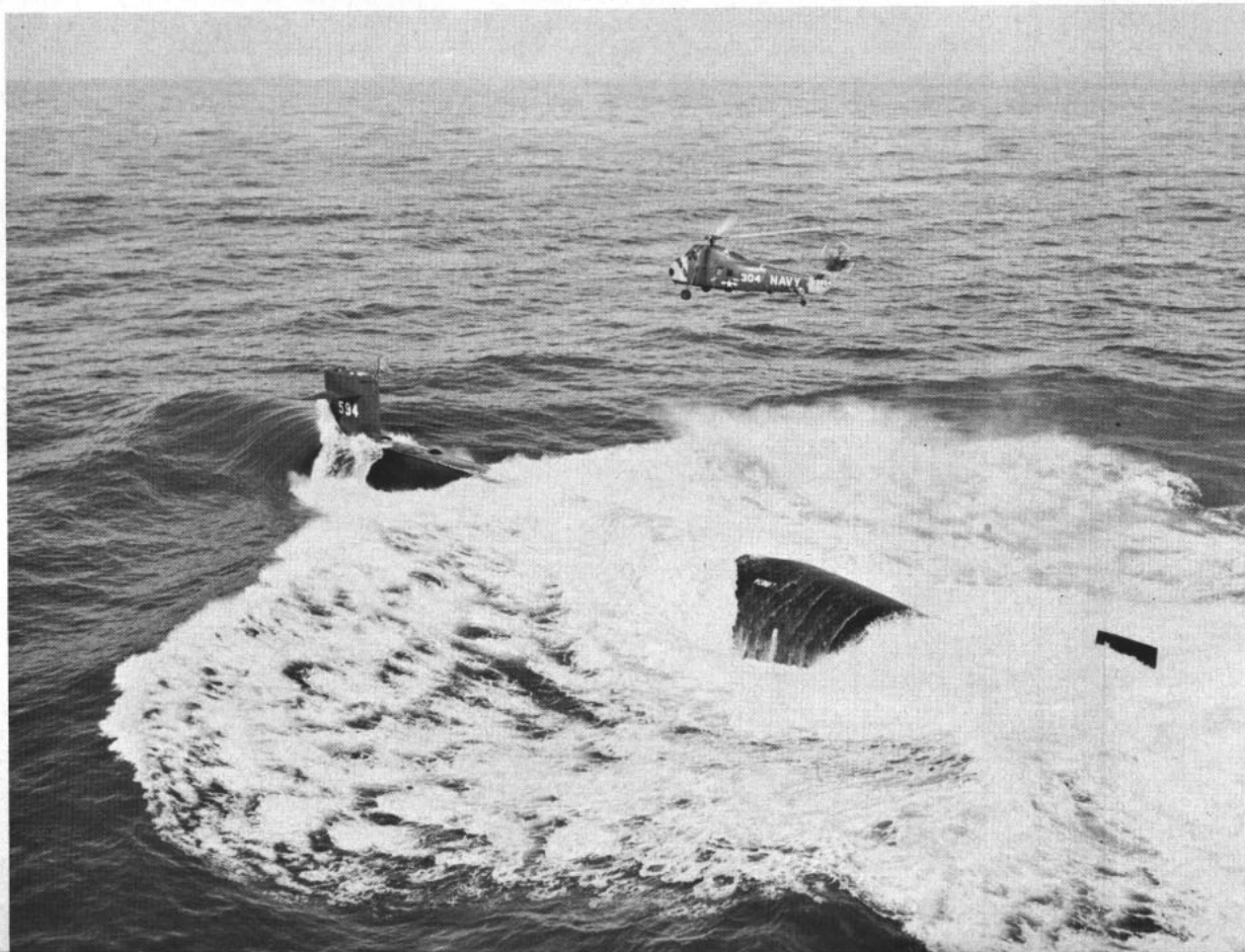
undergo various tests to determine their training progress. Many of these Reservists will sew on another stripe.

Members of Selected Reserve Crews—on board the ships ordered to join the Fleet last fall and soon to be released to inactive duty—undergo their ACDUTRA as a unit. In addition to drilling one weekend a month on board their ship, they cruise for two weeks each year. On alternate years, these cruises are taken under the guidance of the Fleet Training Group, operating out of Guantanamo Bay or San Diego, and the ships compete for Battle "E's" while undergoing this phase of their training. This period under the FLETRAGRU is similar to the Naval Reserve Operations Readiness Cruise which is, in effect, a modified refresher training period. This practical, sea-going training paid off in spades when the ships—and their Reserve Crews—received their ACDU orders almost 10 months ago.

Here is a quick rundown of some other types of ACDUTRA which



SALTY TOUCH—Reservists on ACDUTRA train on board CVA 62. Below: Reserve copter crew fly ASW mission.





THE TEST—Reserve Crew of USS Miller was ready to go when called. **Rt:** Weekend Warrior returns home.

should give you a pretty good idea how varied Reserve training can be.

Air Intelligence specialists from many parts of the country took part in an "Escape and Evasion Survival Seminar" on the west coast. The first week of their training was devoted to indoctrination in survival techniques. The second week, the Reservists put into practice what they had learned; they conducted a practical field exercise in a remote mountain area, living on survival rations or off the land while being hunted by Army and Marine Corps troops acting as enemy forces.

Reservists of Ship Activation, Maintenance and Repair Division 12-3, Stockton, Calif., spent their ACDUTRA reactivating the large tug, LT-2077. The tug was scheduled for use by NOTS Pasadena Annex, in operations near San Clemente Island, Calif.

A whirlybird squadron from NAS Dallas, Tex., got lots of practice

in rescue operations while on ACDUTRA. The Reservists helped some 500 pilots and crewmen fulfill a requirement that they be rescued from the drink by helicopter.

Many communities may not know much about Reservists working in such fields as harbor defense or petroleum, but have first-hand knowledge of the Seabees' "Can Do" activities. For years, Reserve Construction Battalions have been helping build or refurbish Scout facilities, picnic areas and the like, while getting checked out in practical factors. Sometimes this combination of on-the-job training and good will is carried out during weekend drills; on other occasions, an ACDUTRA period may be devoted to heaving around on a large-scale community project.

The Seabees have now launched a four-year program designed to enhance their mobilization potential. Battalions from neighboring districts

join forces in this new readiness program. The cycle of training goes something like this: The first year, the Seabee Reservists undergo organizational training at one of the CB centers. The second year they concentrate on military training at Marine Corps bases. The third year they undergo operational training at the centers, and the fourth year they have practical factor checkouts, also at the CB centers.

Each year, this Bureau issues a catalog of ACDUTRA periods available to Reservists. Under such headings as Advanced Base or Amphibious or Public Relations or BuWeps, you'll find just about all the courses you can think of—and many you've never run across before.

No matter what the field of specialization, or—for that matter—generalization, Reservists are getting the word. And, as the recent partial mobilization proved, when the "call" comes, the Reservists are ready.

RESERVE STRENGTH—CBs keep sharp with many projects. **Rt:** Reserve training unit gets the word at sea.



LETTERS TO THE EDITOR

Destroyer Command Designator

SIR: In connection with the designation "qualified to command a destroyer"—what are the criteria for such qualifications? Must one have actually commanded a destroyer before he is considered to be qualified for command, or may one be considered qualified if he has served as executive officer of a destroyer and his fitness report indicates that he is considered qualified for command?

On the same subject, is there an age limit beyond which a commander may not be assigned to command a DD? If so, what is the basis for such limitation?—T.B., CDR, USN.

• BuPers Inst. 1210.9 of May 1959 introduced the "04" designator as a formal qualification for command of destroyers, and stipulated the means by which each of several different officer categories might qualify for consideration. These categories were determined by the status and degree of an officer's association with destroyers.

In its original form the instruction included a provision for consideration of an officer who had previously been reported as qualified in a fitness report or a ship's monthly roster of officers. However, Change One to the instruction canceled this clause, and it was not included when the instruction was incorporated into the "BuPers Manual."

Art. C-7316 of the "BuPers Manual" dictates current prerequisites for qualification for command of destroyers, and establishes the means by which they may be accomplished.

This article differentiates between three general groupings of officers—those who have had command of a destroyer type, those who are currently in command of destroyer types, and those who aspire to command destroyers.

Officers in the first category may request that the Chief of Naval Personnel

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D.C.

review their records to determine their eligibility for the 04 designator.

Officers currently in command will be considered upon recommendation of their unit commanders.

Officers in the third category must qualify under COMDESLANT/COMCRUDESPAC Joint Inst. 1210.1A of June 1961, which requires practical examination in shiphandling and seamanship, a written exam on theoretical knowledge and a professional paper on some appropriate subject. This instruction also specifies certain eligibility requirements which must be met before an officer may be recommended by his commanding officer for the 04 designator. In every case, requests are reviewed by the Chief of Naval Personnel, and final action is based on qualifications, recommendations and the performance record of the individual concerned.

It might be well at this point to give some explanation as to the meaning of the 04 designator. For those officers who have had command, and those who are in command, of destroyer types, it is a mark of exemplary service in command of such types. In the case of officers who have not as yet been ordered to command of a destroyer type, the designator signifies demonstration and attainment of at least the minimum practical and academic standards required of a destroyer CO.

A pool of officers holding the 04 designator is a most logical source of future COs—indeed, it is expected that future selection of destroyer type COs will be restricted more and more to those officers holding the designator. However, every officer ordered to command must be cleared by a standing command board in BuPers, and the actual assignment is a product of competitive screening and selection. Possession of the 04 designator does not exempt an officer from this process, nor does it, in itself, constitute assurance of orders to command a destroyer. At the present time it is possible that an officer well qualified by record, but lacking formal qualification, would be ordered to command of a destroyer.

In regard to the second part of your question, it can be generally stated that

an officer who is much older than the average member of his promotional year group is at some disadvantage in competing for destroyer command billets. There is no maximum age cutoff as such, but age is a matter which is weighed along with other qualifying factors when he is before the command board. The reason for this should be obvious when you take into account the great physical strain which must be borne by a destroyer type CO under various operating conditions.—Ed.

Buzzed by 1.7 Per Cent

SIR: We accept the challenge issued by the Naval Air Facility, Monterey, Calif., which appeared in the December 1961 ALL HANDS letters section. Monterey claimed its reenlistment rate during a 10-month period was probably higher than any station with an average on-board count of 500 enlisted men.

During a similar period at NAAS Fallon, Nevada (September 1961 through May 1962), we shipped over 46 out of 54 men who were eligible for reenlistment in the Regular Navy. Our reenlistment percentage: 85.2; Monterey's: 83.5.

For the information of readers who have not heard of NAAS (Naval Air Auxiliary Station) Fallon, it is located 70 miles east of Reno on U. S. Highway 50. The environment here is semi-desert. Some of the world's finest hunting, fishing, and camping sites are not far away.

We provide services to Fleet and Reserve Navy and Marine air squadrons which come here to sharpen up their bombing and gunnery tactics. Fallon has the Navy's longest runway—14,000 feet.

At present our on-board count is 585 enlisted men and 32 officers.—MAX A. PIPER, CAPT, USN.

• Some quick figuring shows Fallon ahead by 1.7 per cent. Congratulations. Both commands, however, rate a pat on the fuselage.—Ed.

Last BB to Be

SIR: A shipmate and I disagree on which battleship was the last to be decommissioned. I say USS Wisconsin (BB 64) was the last one. My friend insists it was Iowa (BB 61). All I need to prove I'm right is some verification by ALL HANDS.—W.B.L., DCCS, USN.

• You're right—but only by 12 days. Wisconsin was decommissioned on 8 Mar 1958. Iowa went out on 24 Feb 1958.—Ed.

Reapplying for LDO

SIR: Will my request for advancement to Limited Duty Officer be considered in subsequent years without further application to BuPers, or must I resubmit my application each year I desire to be considered?—J.H.M., PRCM, USN.

• Your application for the Limited Duty Officer (Temporary) Program is valid for consideration by only one selection board. You must submit a new application each year you want to be considered.—Ed.



TWO BOW OUT—V. I. Hardwick, MMC (left), and B. J. McCarter, DKC, join Fleet Reserve in ceremony on board USS *Prairie* (AD 15).

Kitty Hawk or Forrestal Class?

SIR: In the January 1962 *ALL HANDS* you intimate that USS *Constellation* (CVA 64) is a *Forrestal* class carrier. Actually she is a *Kitty Hawk* class ship, so named after her sister ship, USS *Kitty Hawk* (CVA 63).

Kitty Hawk, at 1058 feet, is ten and one-half feet longer than *Constellation*. The extra space is an extension to accommodate the latest jet engine test equipment. She is also 268 and one-half feet wide, vice 252, owing to an addition to the angle deck.

Aircraft which have operated aboard *Kitty Hawk* include the fast, high-flying F4H *Phantom* fighter-interceptor and the A3J *Vigilante*.

Constellation is due to join *Kitty Hawk* in San Diego this summer after sailing around Cape Horn, the same route taken by *Kitty Hawk* last fall.

Perhaps *ALL HANDS* could tell its readers if the Navy is currently building any more *Kitty Hawk* class carriers, and if so, where and when they will join the Fleet.—J.R.M., LTJG, USN.

• There seems to be a slight difference of opinion here. We checked with the Bureau of Ships and they tell us that *Kitty Hawk* was built under somewhat different specifications from *Forrestal*, and is carried as a *Kitty Hawk* class carrier in the "Naval Vessel Register." Thus, those that follow, such as *Constellation* and *America* (CVA 66) (due to be launched at Newport News, Va., in August 1963), are also *Kitty Hawk* class carriers. However, *Kitty Hawk* is only a few feet longer than *Forrestal* and is the same width, hence all of these ships are generally known

as *Forrestal* class carriers.

The only "super" carrier not considered in the *Forrestal* class by BuShips is USS *Enterprise* (CVAN 65). She is truly in a class by herself.—ED.

Emergency Stop

SIR: We interrupted a hot argument to write this letter. The subject of the debate is the distance required to stop the forward progress of a *Midway*-class aircraft carrier from flank speed forward. Emergency stop is the condition in question.

Can you resolve the problem?—G.W.C., GMC, USN.

• We'll try. Unfortunately, our Editor-in-Charge-of-Stopping-Aircraft-Carriers couldn't persuade any carrier captain to let him make an emergency stop with his ship.

In lieu of learning by doing, we turned to BuShips where we found there are so many factors involved in stopping an aircraft carrier that a definite, once-and-for-all answer is out of the question. However, we did glean these tidbits.

During official trials, the distance required to stop USS *Franklin D. Roosevelt* (CVA 42) from full power ahead was 1360 yards.

At the time of the trials, the ship was light (56,360 tons) and the exercise was conducted under trial conditions.

In other words, the maneuver was anticipated by the throttlemen.

No post-conversion trial data of this nature was available. However, BuShips estimated that, under normal conditions, the distance would probably be in the vicinity of 2100 yards.—ED.

Longest Continuous Deployment

SIR: I would like to nominate USS *Mockingbird* (MSCO 27) (former AMS 27 and YMS 419) as a contender in the continuous deployment sweepstakes. I don't know exactly when she left the United States during World War II, but the *Navy and Marine Corps Awards Manual* (NavPers 15790) shows that, as USS YMS 419, she participated in minesweeping operations in the Bungo Suido (Honshu) area as early as 27 Oct 1945 and was awarded the Navy Occupation and China Service medals for service commencing on 13 Oct 1945.

Since it takes about 30 days for a ship of her class to cross the Pacific, her deployment obviously started before October 1945. She stayed continuously in commission in WESTPAC and was homeported in Yokosuka, Japan, until the outbreak of the fighting in Korea.

She served in the Korean campaign and was awarded the Presidential Unit Citation and earned all 10 of the Korean engagement stars that have been authorized. She continued in WESTPAC after Korea and served until 1955 or '56, at which time I believe she was decommissioned and transferred to the Japanese Maritime Self Defense Force.

I believe her total continuous deployment overseas was about 10 years, and as one of her former skippers, I would be interested to know the exact length of this deployment. It appears that, to the Mine Force motto, "Where the Fleet goes we've been," must be added, "and stayed longer."—LCDR R. L. RODIER, USN.

• *Mockingbird's* continuous deployment time is rather impressive, but it wasn't quite so long as you thought.

We don't have the entire story but, so far as we can tell, she left San Pedro, Calif., on 27 Aug 1945 for the Far East. She returned to the United States in April 1946 for overhaul and, to the best of our knowledge, didn't go back to Japan until about January 1948. She then remained overseas until she was transferred to the Korean navy on 6 Jan 1956. The last we heard she was still serving in the Korean navy as Ko-Chang (MSC 521).

During her career in the U.S. Navy, she was USS YMS 419, *Mockingbird* (AMS 27) and *Mockingbird* (MSCO 27). She earned the following awards: Presidential Unit Citation; American Theater Medal; Asiatic-Pacific Campaign Medal (one star); World War II Victory Medal; China and Navy Occupation Service Medals; Korean Service Medal (10 stars); United Nations Medal; and Korean Presidential Unit Citation.

Mockingbird was commissioned on 18 Nov 1944. Her first minesweeping assignment was in the waters around Bungo Suido, Honshu, from 27 through 30 Oct 1945.

Her continuous deployment, accord-

ing to available records, was eight years—January 1948 to 6 Jan 1956. *uss Augusta* (CL 31), to which we often refer in such claims, was deployed in the Asiatic area for seven years—1933 to 1940. Some ships in the "Old Navy" beat your eight-year mark by many years. *uss Scorpion*, for example, was deployed overseas from 22 Oct 1908 to 11 Jul 1927—almost 19 years.—Ed.

World War I Gyro School

SIR: I was rereading the article entitled "Gyro Compass" (November 1961 "What's in a Name"). It provided the stimulus I needed to make the trek from the house to the garage where I dumped out the contents of an old sea bag and came up with a photo of the Sperry Gyro class of 1918, for Navy trainees.

More than 40 years is a long time to try to remember anything. However, with the help of the photograph, I could recall quite a bit.

Getting back to your article, I found no discrepancies except, as I recall, in 1911 there were two gyro compasses installed on our ships at sea for experimental purposes. One was on the armored cruiser *Maryland* and one on *Delaware* (BB 28).

The maintenance men on both ships were rated Elec. 2nd class (g). In *Maryland*, there was a chap named Weiler. A guy named Tom Morgan was in *Delaware*.

Both men stood watch, cussed and slept alongside the contraption during tests and both men later went to their reward—provided in this case by Elmer Sperry.

Both were offered and accepted employment with the Sperry organization at the expiration of their enlistments.

Morgan, in true Horatio Alger manner, progressed through the Sperry organization until he reached its presidency and ultimately became Chairman of the Board.

Mr. Weiler, after several years with Sperry, returned to his first love, the Navy, in a civil service capacity. He later was in charge of the gyro laboratory at the Bremerton Navy Yard.

Before World War I, when ships equipped with a gyro compass were in the yard for regular overhaul, it was Navy policy, in cooperation with the Sperry Company, to send its gyro electricians to the Sperry Building in Brooklyn for additional instruction in theory and operation.

Numerically, these classes were small but, with the advent of World War I, conditions changed.

Navy asked Sperry to build a compass which would be light enough to use in destroyers.

Sperry complied and the number of students in the gyro class mushroomed sufficiently to give it the status of a school.

Our student body consisted of officers



LONG AGO—Members of Gyro Compass Class of 1918 pose for photo. Graduates of the six-week course were assigned to new destroyers.

assigned to new destroyers, enlisted men "drafted" from the Fleet and reenlistees.

Our curriculum, under a civilian instructor, consisted of general theory, occupation and maintenance.

For our maintenance course, we had only one old compass to work on which, incidentally, was not the type we were studying.

It was pulled apart so often the threads were worn off its special bolts and parts. At times, we even had parts left over, but it served the purpose.

School hours were from 0900 to 1130 and from 1300 to 1630. Our instructor tried patiently, but unsuccessfully, to imbue us with the solid facts on the theory of the instrument but he was over our heads.

He also made a weak pass at giving us home work. That was a laugh. Where would we do it? In Times Square or St. Nick's Ballroom?

At 1630, the class would scatter from Brooklyn to the Bronx; each to his own entertainment.

The course of instruction lasted six uninterrupted weeks. It was like riding around on a loop bus; someone was getting on or getting off continuously.

When the course ended, the graduates were transferred to 1000-ton destroyers as they were launched. There we tested the capabilities of the compact model gyro compasses. Sometimes, under severe conditions, there was considerable doubt as to which would win—the elements or the gyro compass.

Like most things that we see in retrospect, they were good days. Even viewing it objectively, I doubt that there was ever another Navy school to compare with the Sperry Gyro School of 1917-18.—R. R. Myers, EMC (Ret).

• Thanks, Ray, for another story from your nearly bottomless sea bag.—Ed.

LCTs in World War II

SIR: I read with interest the information you published in your February issue about *uss Breese* (DM 18). The part about the invasion of the Russell Islands, where she escorted LCTs, interested me most.

Unless I've missed an article somewhere during the intervening years, this is about the first mention anyone has made of LCTs in that area.

I served in LCT Flotilla Five in the Solomons and aboard LCTs 60 and 62 until long after Bougainville was secured. I would be interested in a history of LCTs in these Pacific operations and I believe quite a few of my old shipmates would be, too.

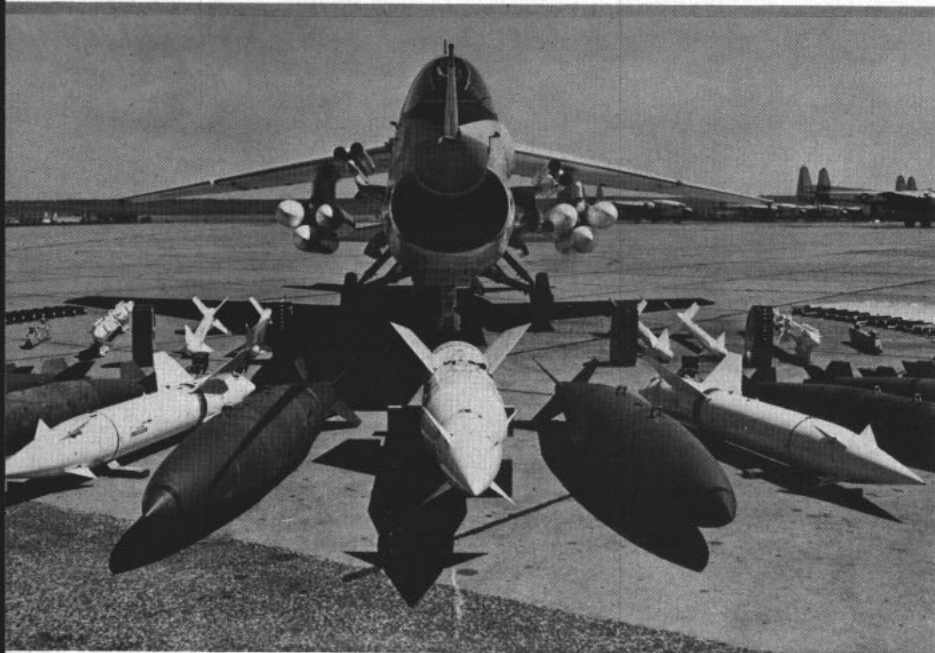
We charged frantically around (flank speed was about six knots) in all directions, carried anything anywhere, and in all modesty, we did a good job.—J.R.M., SMC, USN.

• No one will argue that last point with you. LCTs did a magnificent job in the Solomons with their "milk runs" for resupply and troop reinforcement during the struggles for Guadalcanal, Bougainville and other islands in the southwest Pacific area.

Unfortunately, the Ships' History Division of the Office of the Chief of Naval Operations has not yet prepared a narrative history of LCT Flotillas five and six or LCT 60 and 62.

Histories of all the ships in the Navy are being written by this division for the series "Dictionary of American Naval Fighting Ships." Volume I has already been published and Volume II should be out this year. The histories of unnamed ships will be prepared when those on the named ships are completed.

Perhaps this letter will stir up the memories of other readers who recall the exploits of the LCTs.—Ed.



CARRY-ALL—Navy's Crusader is tested for capabilities to take on role of attack aircraft and pack variety of weapons shown here.

Gold Crewmen Claim Record

SIR: A letter to the editor in the May ALL HANDS commended the high reenlistment rate achieved by VS-35. It was indeed a fine showing—but I feel that the Gold Crew of USS Robert E. Lee (SSBN 601) has chalked up a reenlistment record which will be even harder to top.

In the 20 months since commissioning, 95.6 per cent of our career men (22 of 23) have shipped over, and 71.4 per cent of our first termers (10 out of 14) have followed suit, for an over-all reenlistment average of 86.5 per cent.

These figures do not take into account the dozens of extensions or agreements to extend which have been executed. The Gold Crew averages about 125 men.

Can anyone top these figures with the same number of people involved?—M. S. BLAIR, CDR, USN.

• We don't know if you've achieved a record for your class or not, but we will say that we have not yet heard of any better. In any case, Commander, you have obviously got a record to shoot for. Our congratulations.—Ed.

Add-a-Stripe Day

SIR: USS Sierra has celebrated an add-a-stripe day. The ship set a new promotion record aboard when 144 men (15 per cent of the crew) were advanced in rate. The former high was 125 men advanced at one time.

The ship added six new chiefs, 10 new PO1s, 49 new PO2s and 79 new PO3s. All these men were officially advanced by the ship's commanding officer, Captain George R. Reinhart, USN, during a special advancement ceremony.

Sierra is currently undergoing a \$2 million FRAM overhaul period at the Naval Shipyard, Portsmouth, Va.—Crew of USS Sierra (AD 18).

• This is an impressive number of men to be advanced aboard one ship on one day. It speaks well of the men advanced, certainly, but it also indicates that there has been some good leadership exhibited along the line.—Ed.

Aviation Administration Man?

SIR: Some scuttlebutt concerning a special rating for aviation personnel who perform clerical duties has been circulating through our squadron for several months. We've yet to hear anything official. If such a rating is being planned, I, for one, would be interested in knowing its name, the date it will become effective, and the present ratings which would be eligible to change over.—M.E.W., AMS3, USN.

• Speculation about a special rating for aviation clerical workers may be the result of the General Aviation Technical Training Conference which was held at Memphis, Tenn., last April. It was proposed at the conference that a rating named Aviation Administration Man be incorporated into the enlisted structure.

As of this writing the Aviation Administration Man rating is no more than a recommendation; the proposal has yet to be considered by the Permanent Board for Review of the Enlisted Rating Structure. Since it's still just an idea, no action has been taken on such technicalities as eligibility requirements.—Ed.

Who's in Command?

SIR: I am searching for information that will clarify a situation which took place recently, at the Naval Air Station, Point Mugu, Calif. I have discussed this problem with several senior officers in the local area and I still do not have an acceptable answer.

One of the departments of this naval air station has some 15 small craft assigned, most of which are former Air Force aircraft rescue boats (AVRs) and ex-PT boats. They furnish logistic support for the offshore islands and serve as range clearance boats for the Pacific Missile Range. A first class petty officer is normally in charge. On occasion, however, a commissioned officer is embarked for unusual assignments.

Recently, one of these AVRs participated in a celebration at Santa Barbara, Calif. The Commanding Officer, Naval Air Station, Point Mugu, and two other Navy captains were embarked in the boat during part of the festivities which required the boat to get under way. The two captains, one a line officer eligible for command at sea and the other a CEC officer, were guests of the commanding officer.

When the guest line captain boarded the AVR, he queried the commanding officer of the naval air station as to his date of rank. It turned out that the guest line captain was two years senior to the CO of the naval air station. Subsequently, the guest line captain remarked, "I guess I am in charge of the boat."

Article 1331, U.S. Navy Regulations says: "When embarked in a boat, the senior line officer, including commissioned warrant and warrant officers, eligible for command at sea, has authority over all persons embarked therein, and is responsible, under all circumstances, for the safety and management of the boat." Applying this article, it would seem that the line captain should have been in charge of the boat.

Article 0701 of U.S. Navy Regulations, however, says: "The responsibility of the commanding officer for his command is absolute, except when, and to the extent, relieved therefrom by competent authority, or as provided otherwise in these regulations. The authority of the commanding officer is commensurate with his responsibility, subject to the limitations prescribed by law and these regulations. . . ."

My question, simply stated, is: "Who should have been in charge of the AVR?"

This is what I think: An AVR is not a boat, in the sense that an AVR is not taken aboard a ship. It is a craft that operates independently and is self-sustaining. If this be the case, Article 1331, U.S. Navy Regulations, does not apply to the situation in question. Article 0701, U.S. Navy Regulations, says, in

part, that the responsibility of the commanding officer for his command is absolute and, also, that a commanding officer's authority is commensurate with his responsibility. I would say, with the above mentioned criteria as my guidelines, that the commanding officer of the naval air station should have been in charge of the AVR.

It is not infrequent that a commanding officer of a ship makes the accommodation ladder of another ship and the two commanding officers go ashore together. In this case, it is very possible that the commanding officer furnishing the gig could be junior to his guest. Article 1331 very definitely applies in this case, since there is no question about a gig being a boat. In this situation, would the junior commanding officer, in compliance with Article 1331, relinquish command of his own gig to the senior commanding officer?—LT J.P.C., USNR.

• No he would not. The gig is his own boat, part of his command—and the second commanding officer, even though senior, is a guest or passenger.

The authority of the commanding officer is absolute over his entire command, and in either case (the AVR or the gig) the boat is part of a command. The officer detailed to command has precedence and authority over all passengers embarked, whatever their rank, and passengers are subject to his authority.

The question here is not one of date of rank, but rather, who is commanding officer and who is the passenger. By Articles 0769, 1305, 1321 and 1329 of "Navy Regulations," the commanding officer, embarked in a boat of his own command, has the same authority over passengers and crew he has on board his own ship or station.

In the incident on board the AVR, the guest captain, when he ascertained that the commanding officer of the air station was embarked in his own boat, should have realized he could not take charge of the boat, as he had no authority to relieve a commanding officer of his responsibilities.

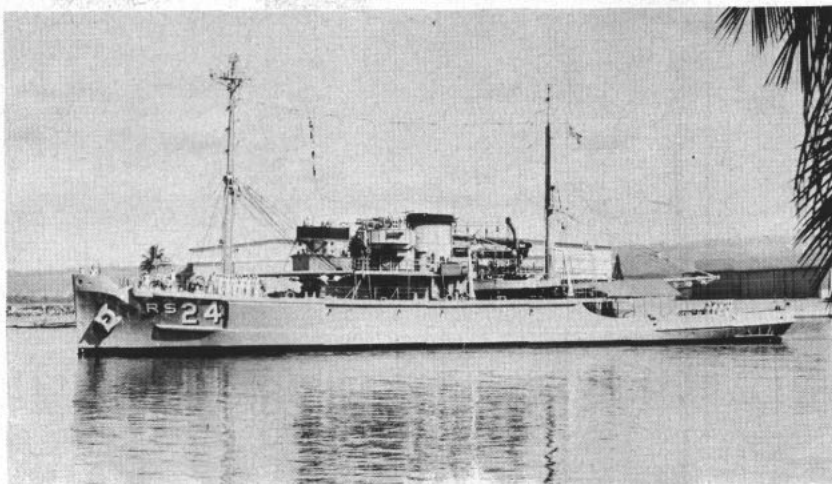
The following regulations are pertinent:

Article 0701.1—"The responsibility of the commanding officer for his command is absolute. . . . Delegation of authority shall in no way relieve the commanding officer of his continued responsibility for his entire command."

Article 0757.1—"Boats shall be regarded, in all matters concerning the rights, privileges and comity of nations, as part of the ship or aircraft to which they belong."

Article 0769—" . . . all passengers in a ship or aircraft of the naval service are subject to the authority of the commanding officer. . . ."

Article 1305—"An officer . . . detailed to command . . . has precedence over



SHIP SAVER—USS Grasp (ARS 24), a salvage ship in Service Force Pacific, departs Pearl Harbor to conduct another operation.

all officers or other persons attached to the command, whatever their rank. . . ."

Article 1329—"The commanding officer of a ship or aircraft . . . with a flag officer embarked . . . shall be subject to the orders of such flag officer; other officers embarked as passengers, senior to the commanding officer, shall have no authority over him."

Article 1331—"When embarked in a boat the senior line officer . . . eligible for command at sea has authority over all persons embarked therein, and is responsible under all circumstances for the

safety and management of the boat." (This article apparently covers a situation when the commanding officer is not on board.)

As you can see, much has been written about the authority of the commanding officer.—Ed.

One Word for Two

SIR: What is it, "personnel man" or "personnelman?" We have a running argument here in the office and no one wants to concede defeat.

I say it is "personnel man," as indicated in the PN training course, NavPers 10258C (Revised 3-61). Some of the others say it should be "personnelman," and use Change Seven to the BuPers Manual, Change 18 to the Qualifications for Advancement in Rating and the current change to the Navy Enlisted Classification Manual as their references.

If I'm wrong, when did this change take place? — N.P.M., PN1, USN.

• You are wrong but you haven't been that way long. The publications to which your office-mates refer were only recently changed to the one-word usage.

The "Manual of Qualifications for Advancement in Rating," NavPers 10068 (Revised), issued in September 1952, used two words. It wasn't until Change 18, dated September 1961, that it was changed to "personnelman."

The "Manual of Navy Enlisted Codes," NavPers 15105B, also used two words until September 1961. At that time, Change Six, which adopted "personnelman," was issued. The current change to the "BuPers Manual," Article C-2103(5), also uses "personnelman."

You pick as your reference about the only book we know of that has not been changed to reflect the current usage, "personnelman." The current usage does make sense, since it now conforms to other ratings such as yeoman, opticalman, instrumentman and radioman.—Ed.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• USS Santa Fe (CL 60)—The 16th annual reunion will be held in Philadelphia, Pa., during October. For additional information, write to Frederick C. Jaissle, 18 Cedar St., Hudson, Mass.

• Sixth Seabees—A reunion will be held at the Bismarck Hotel, Chicago, Ill., 11-13 October. For details, write to Roy Anderson, 1 Chestnut St., Clarendon Hills, Ill.

• Great White Fleet—The annual reunion for all men who made the world cruise in 1907-09 will be held in the U. S. Grant Hotel, San Diego, Calif., on 14 December. For information, write to Harry S. Morris, TMC, USN (Ret), 5070 Marlborough Dr., San Diego 16, Calif.

• FAWTULANT (Detachment Alfa), Jacksonville, Fla.—All who served in this unit and who are interested in holding a reunion may write to Walter R. August, 704 West Beacon Rd., Lakeland, Fla.

Eligibility for STAR Program

SIR: I read in your magazine about the number of Navymen being advanced and reenlisted under the STAR program.

I am a fireman, I joined the Navy in August 1961, and I will graduate from Class "A" EM School in September. Am I eligible to advance to EM3 under the STAR program when I graduate? —J.C., FN, USN.

• You will be eligible to advance under the STAR program, provided you reenlist for six years and graduate in the upper half of your class. Since you need one year of active naval service to be eligible for the STAR program, you must reenlist sometime this month. You shouldn't waste time, however. Work on the second half of your qualifications. Hit the books hard and make sure you will be in the upper half of your class. Don't try to ride the middle rail either. Be high in the upper half, just to make sure.

The eligibility requirements are simple. Men going into STAR must have served at least one year on active naval service, but less than six, reenlist for either four or six years to provide a total of seven or more years' active naval service, and meet the test score requirement for entering Class "A" school. The applicant's CO can waive up to 10 points on combined test score requirements or up to five points on a single test score requirement. (Since you are already in school, it's obvious you qualify here.)

The requested school (for those not already in school) must be in the normal path of advancement, and the applicant must be recommended for career status by his commanding officer. Since you are an EM, you may be reenlisted and advanced by the local command without prior approval of the Chief of

Naval Personnel, provided you meet all the requirements that are listed in BuPers Inst. 1133.13A. In addition to EMs, men in the following ratings may also be advanced under the STAR program without prior approval: AD, AE, AO, AQ, AT, BT, CT, ET, FT, GMT, GS, IC, MM, MR, PR, PT, RD, RM and SO. Men in other ratings are also eligible for the STAR program, but must have approval of the Chief of Naval Personnel before they can be reenlisted and advanced.

If the applicant waits until after he graduates from Class "A" school (as in your case), he may still reenlist and be advanced under the Star program—if he graduates in the upper half of his class. —Ed.

DD is Fast Worker

SIR: Although *uss Barry* (DD 933) made a fine Christmas tree on the front cover of the December issue of *ALL HANDS*, we also want your readers to know that *Barry* is a fast-working Navy destroyer.

We proved this last March in a HUK operation in the Atlantic. At exactly 0727 on the morning of 20 March, *Barry* signaled *uss Lake Champlain* (CVS 39), "ready to come alongside." Our CO, Commander H. O. Webster, USN, cranked up flank speed and bored into the refueling slot. As the gap between the ships closed rather rapidly, Rear Admiral J. R. Reedy, USN, COMCARDIV 20, aboard *Lake Champlain*, hailed, "Captain, we have a hose. You don't have to pass the fuel across in buckets."

A combination of calm seas and skilled ship handling brought *Barry* to within 10 yards of the carrier and the first lines were almost handed across. As the fuel hoses snaked out across the gap, *Barry* "tigers" reached out and

guided them into their trunks. At 0733, five minutes and 55 seconds after the approach began, both forward and after fueling stations reported that pumping had started.

A band appeared on a lower deck of the carrier, and to the music of "Anchors Aweigh," the carrier announced that *Barry* had set an all-time record for approaching and rigging to receive fuel alongside *uss Lake Champlain* (cvs 39).

Barry received the following message from RADM Reedy: "Congratulations on your fine performance fueling today. Your time of five minutes and 55 seconds from commencement of approach to receiving fuel is the fastest of 224 DDs alongside *Lake Champlain*." —D. A. Frothingham, ENS, USNR.

• This sounds like a combination of some mighty fancy ship handling and some pretty efficient hose handling. Nice going.

Record rigging time seems to be almost a seasonal topic. We have been receiving many letters lately which have claimed records in this department. Yours is slightly different from most because the time includes the approach.

uss Truckee (AO 147) tells us of another impressive rigging time when *uss Bigelow* (DD 942) rigged forward in 83 seconds and aft in 97 seconds while refueling from *Truckee*. This, we feel quite sure, does not include approach time.

Refueling from tanker to destroyer may not be in the same league with carrier to destroyer, but the *Bigelow* mark is fast.

You may be interested in a rather extensive list of rigging times that has been compiled by *Truckee*. It appears in the Letters to the Editor section of the May 1962 *ALL HANDS*. —Ed.

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BLINDFOLDED boxers highlight *Vulcan's* smoker. Below: R. P. Hatfield, HM2, acts as master of ceremonies.

Vulcan Has a Smoker

HARD WORK, imagination and large doses of advance planning by members of the ship's Enlisted Recreation Committee combined to make a recent smoker, staged aboard *uss Vulcan* (AR 5), at Norfolk, Va., an outstanding success.

As in all smokers, there was boxing and plenty of it—fast-paced, evenly matched bouts which brought roars of approval from *Vulcan's* crew. The evening's entertainment didn't begin and end with just boxing, however.

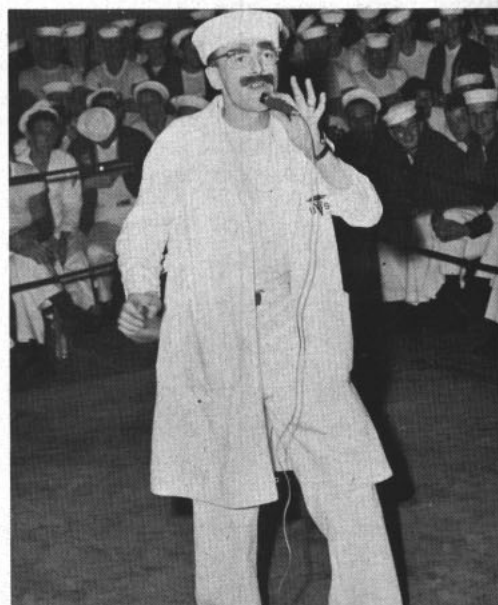
There were, for example, the antics of Hospital Corpsman Second Class R. P. Hatfield. The fast-talking *Vulcan* medic out-Grouchoed the inimitable Groucho while acting as

master of ceremonies for the show.

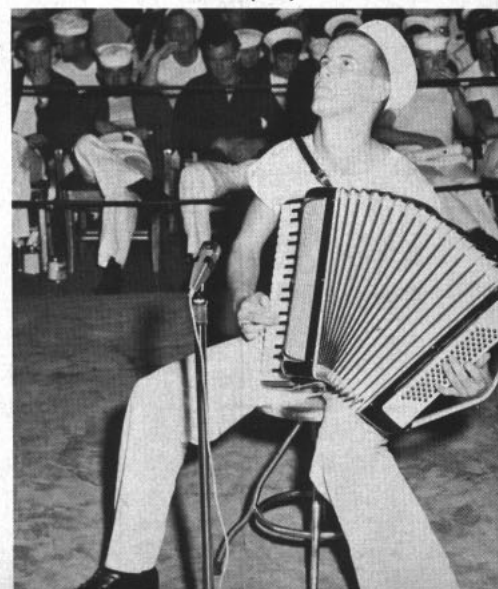
There was blindfolded boxing which, as you can well imagine, bore little resemblance to the real article. And there were also several *Vulcaneers* in varied costume performing their version of the *Vulcan* twist—which resembled nothing seen before or since anywhere.

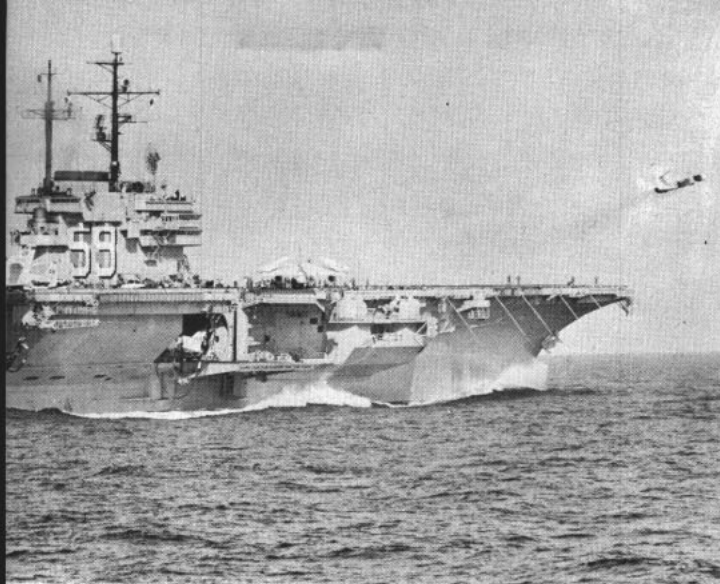
Topping it all off were several performances by the Rebelaires, a swinging quartet featuring electric guitars and a way-out singer. This group tore up hill-billy, rock-and-roll and honky-tonk fans alike.

The veteran Atlantic Fleet Service Force repair ship had just returned to her home port from a two-week trip to San Juan, Puerto Rico.



VULCAN'S Rebelaires go all-out with their rendition of 'Auctioneer.' Rt: An accordionist plays a solo.





UP AND DOWN—Jet is catapulted from USS Forrestal (CVA 59). Rt.: A3D returns to USS Oriskany.

Off Into the Wild Blue

YOU'VE SHOWERED AND SHAVED, had breakfast and checked your charts. The loudspeaker in the ready-room warns you to start for the flight deck.

You zip your G suit, pull on your Mae West, check your cigarette supply and gather up your hard hat, navigation bag and plotting board. As you go through the door, a box lunch is shoved under your arm.

As the escalator moves you toward the flight deck, a speaker squawks, "Hey, Mac, going on a picnic?" You'd think they'd get tired of the same corny gags.

When you step off on the flight deck, it's still an hour before dawn. Sometimes you yawn because, in midsummer, that's early. You climb into your bird.

The engine is running. You check the preliminary items. Everything on the check list is OK and you are

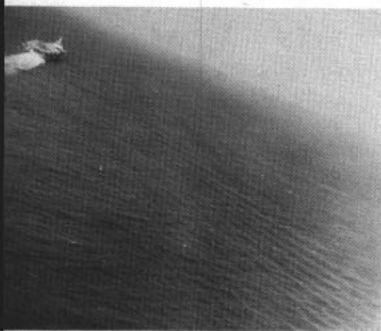
securely strapped in by the plane captain. The jury struts are removed and the folded wings flutter a little as the wind tests their strength.

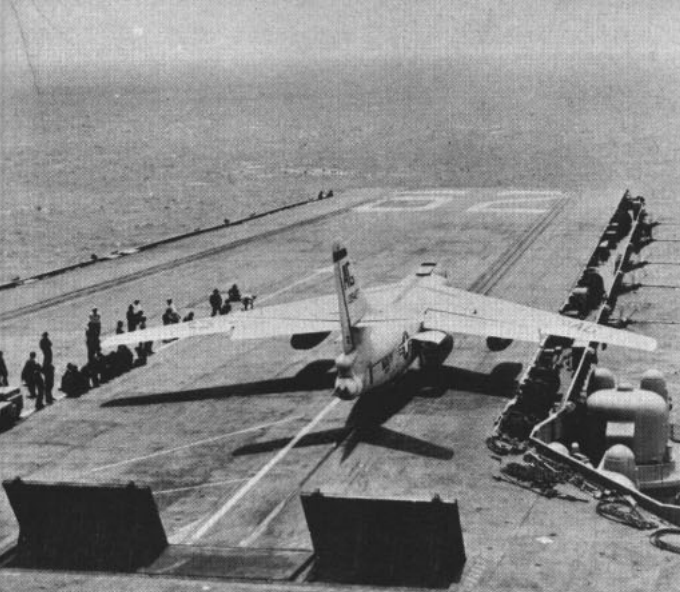
The tie-downs are removed and you push down with both feet to hold the brakes until the signal to taxi forward. Then you release the brakes, add power with the throttle and your plane moves forward.

When you're given the signal, you throw the lever and watch the wings of your bird unfold. You lock them and move the flap lever to the down position and go over the takeoff check list.

The wind has freshened since you came up on deck and you find you need more power to taxi up the center of the flight deck to the "Y" where the line splits in two—one to be launched from starboard, the other from port.

HEADED HOME—Unusual sequence of photos shows pilot's eye view of jet landing on USS Enterprise (CVAN 65).





UP START—A3D is launched from USS Independence. Rt.: Pilot mounts Crusader on USS Oriskany.

-- and Back Home Again

By now, the big carrier is heeling into the wind. This time you're waved to Leaping Lena, the port cat. You hold the right brake and pivot into line for the catapult.

Your position is good and the director waves you ahead. You move up slowly until your plane is jerked to a halt by the taut hold-back line.

The yellow shirt signals "off brakes." Your heels drop to the cockpit floor clear of the brake pedals. You move the stick back and forth in a last minute check of the controls and are gratified to see the ailerons and elevators obediently wag back.

Yellow shirt passes the lead to the catapult officer who gives the two-finger turnup signal. You push the throttle forward and clamp your hand around the throttle to prevent its slipping back during the launch.

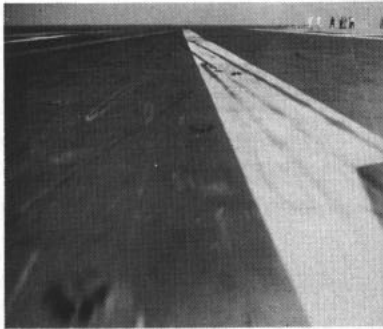
The engine winds up and stabilizes at full power. Its scream penetrates your crash helmet. You glance at the instrument board. Everything's OK. You're ready to go.

You salute the catapult officer—your signal that you're all set. Your right elbow rests in your lap. You keep it poised with stick neutral until after the acceleration period. The plane is trimmed for level flight at takeoff speed.

A few swift seconds after you salute, the cat officer drops to one knee and points his arm toward the bow of the ship. That's it—the fire signal. In a second or so, the power of the cat hits you. Your bird shudders and Gs force your head back hard against the pad as the jets roar in your ears.

Your breath is sucked out of you as the catwalks streak

HERE'S HOW it looks to fly in and land on the flight deck of the Navy's nuclear powered aircraft carrier.





A2F INTRUDER
Low-level attack bomber



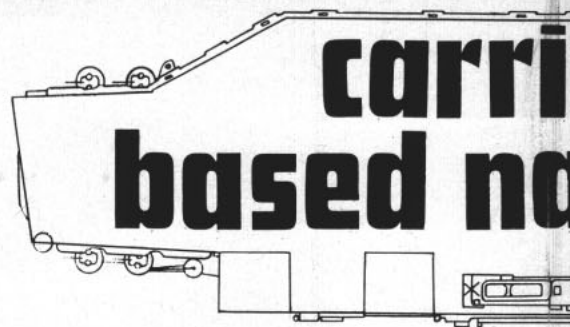
A4D SKYHAWK
Single-seated light attack bomber



AD SKYRAIDER *
Prop-driven attack plane



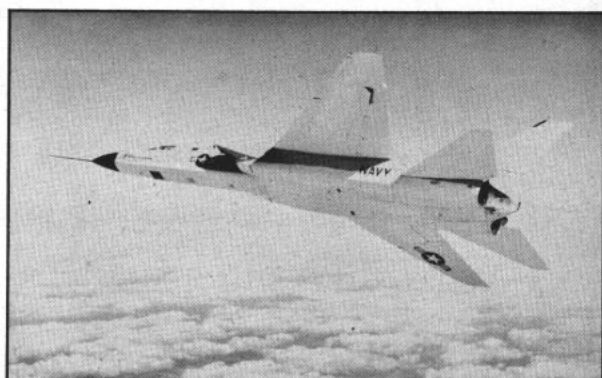
W2F HAWKEYE
All-weather early warning aircraft



Note: For simplification, series numbers of most models have been omitted.



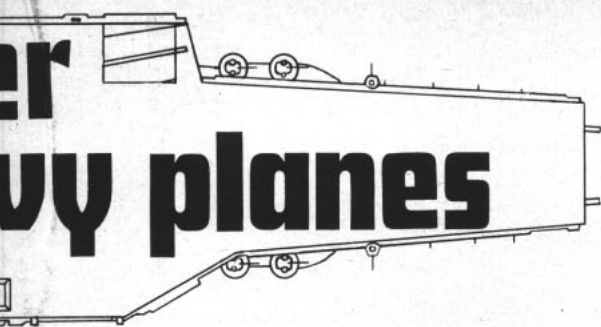
A3D SKYWARRIOR
Heavy attack bomber



A3J VIGILANTE
Two-seated all-weather attack bomber



TF TRADER
Utility aircraft for supplies and personnel



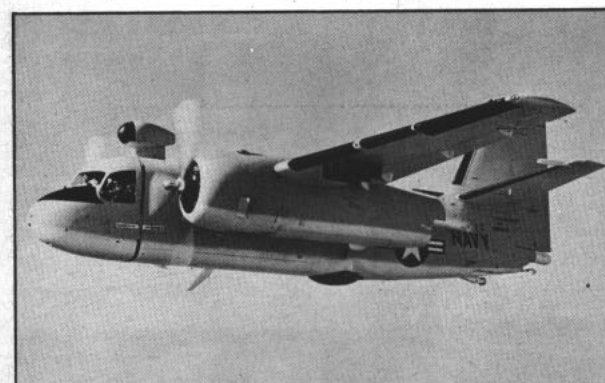
• Being phased out.



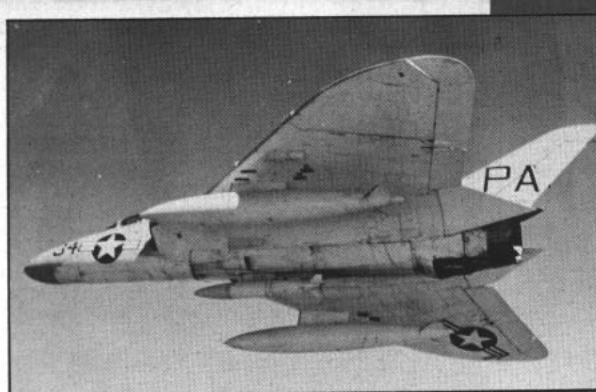
F3H-2N DEMON
Single-seated all-weather fighter



F4H PHANTOM
Two-seated interceptor and attack bomber



S2F TRACKER
Four-seated submarine search and attack plane



F4D SKYRAY*
Delta-winged interceptor



FJ-4 FURY*
Single-seated fighter-bomber



F8U CRUSADER
All-weather fighter



WF-2 TRACER
Early warning aircraft



PILOTS OF VF-53 are briefed before flight. Rt.: Carriermen on board *USS Lake Champlain* (CVS 39) rig barrier.

by you. You reach with your left hand and flick the landing gear lever and watch the wheel position indicators point "up." You ease the control stick and bank away from the carrier which drops behind you in the turbulent jet wash.

YOU'RE AIRBORNE. When you look down and off in the distance, you see the Atlas Mountains and the Pillars of Hercules. "Now who's holding up the sky?," you think.

The target is simulated—an abandoned airstrip near the Med. You put in a good day in the air and head back to the nest. Like a businessman taking the 5:05 back to the suburbs. No, not quite like that.

Finally, the welcome outline of the carrier comes into sight. *Tacan* guides you and you begin to climb. You're tired and feel cramped. You have to force yourself to concentrate. One mistake could be your last. You take a drag or two of pure oxygen to sharpen your senses.

FLOATING HOME—*USS Shangri La* (CVA 38) cruises Pacific. Rt.: *Crusader's* tail hook brings jet to a halt.



The flight breaks up about 28 miles astern. Altitude is 20,000 feet.

THE PLANES APPROACH the carrier at one minute intervals descending to the 500-foot approach altitude.

About five miles from the ship, you lower your landing gear, flaps and tail hook. At three miles, you see the runway lights on the flight deck.

You follow the beam in and watch for the meatball. When it comes into sight, you try to line it up with the center line of the landing area. You have 20 seconds.

The meatball is high and you know you aren't going to make a good pass but the tailhook finally grabs the last wire and you plunge forward in your harness straps. You're back in the nest.

You're directed to taxi to the bow and the plane captain is there with tie-down chains draped about his neck.

You climb out of your bird and limp off ready for chow and a long, long sleep.

—Robert Neil.





'MULE SKINNER'—Mule parks an overnight visitor.

They Keep 'Em Flying

WHETHER WASHING PLANES or tying them down, fueling them, taxiing them, or employing hand signals so a pilot can have another pair of eyes, members of the 25-man line crew at NAS Memphis, Tenn., work towards two goals—proficiency and versatility.

These goals can be reached only through proper training and lots of hard work.

It's the job of LTJG Shep Crigler and his assistant, Willie Cole, ADC, to set up and supervise the training of all line crew members and to produce capable, reliable plane captains. And with more than 150 naval aviators on shore duty doing their proficiency flying in six different types of Memphis-based aircraft, there's enough work to go around.

Each of these fliers regularly entrusts his well-being to the air station's line crew. Once a shore-based aviator leaves his office and heads for a plane tended by the line crew, he assumes that the plane has been checked over by one of them. As an added safety check the pilot repeats the process with a plane captain before beginning the flight. It's the plane captain's responsibility to see that every pilot gets a safe, airworthy plane.

Under the Crigler-Cole training program, it takes about four months to qualify a man for the designator of plane captain on any one type of aircraft. The pinnacle of training is reached only when a man has qualified as plane captain on all six types at NAS.

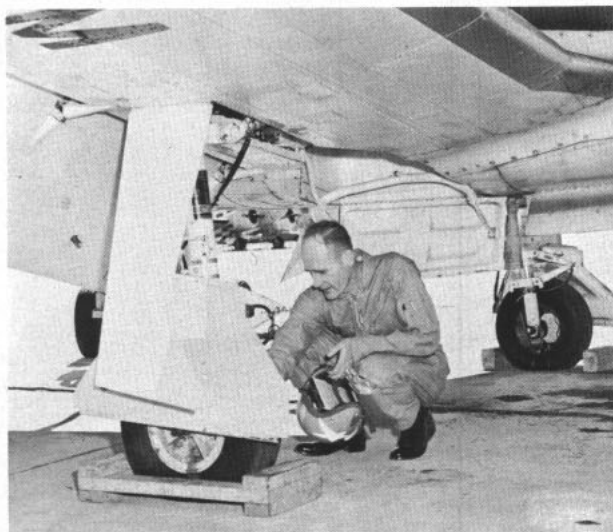
PLANE Captain G. Valania, AD3, inspects controls.

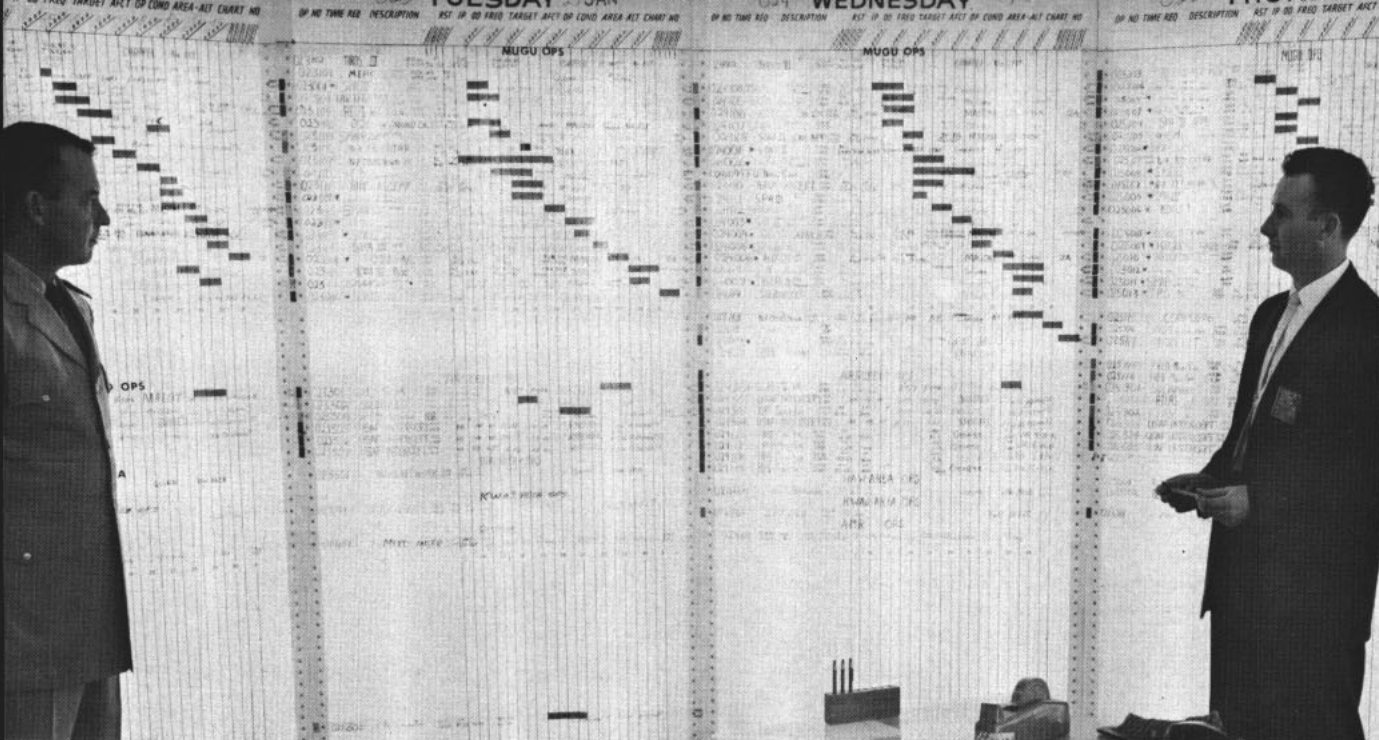


READY—A. Chapman, AN, gives signal to turn up the engine. Below: W. Cole, ADC, briefs his line crew.



PILOT checks over plane before proficiency flight.





SCHEDULE BOARD at Pacific Missile Range Headquarters, Point Mugu, Calif., shows day-to-day operations.

Traffic Cops of the Missile Beat

AT THE PACIFIC MISSILE RANGE these days, closed circuit television's eye is on the *Sparrow*. And on *Nike-Zeus*, *Project Mercury*, and most everything else that flies in that bailiwick, too.

PMR's Range Scheduling Department, you see, has a problem. As Assistant Scheduling Officer, LT Bill Appley, USN, puts it: "Everybody wants to play in our sandbox." These sandbox denizens aren't really playing, however—most of them have something they want to blast off and fly around for varying amounts of time. It's Range Scheduling's job to see to it that these operations don't conflict or interfere with each other.

Obviously, keeping track of more than 10,000 national and international projects each year—that's an average of some 30 per day—is an exacting task. To help do it, Range Scheduling utilizes a massive plexiglass schedule board and a closed circuit television system.

In essence, Range Scheduling's task closely resembles that of the control tower at a metropolitan airport. However, in addition to the aircraft a civilian control tower must contend with, RSD must also coordinate all missile support operations and ship movements within the Pacific Missile Range.

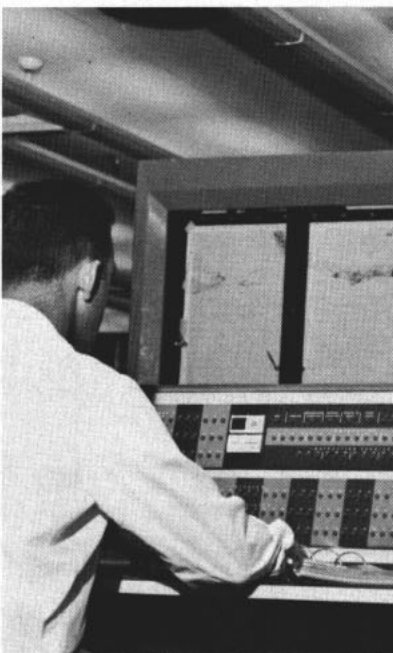
Range Scheduling's jurisdiction extends from Los Angeles up the coast

past Point Arguello, and from the coastline to 180 miles out in the Pacific. Frequently, all of this test area is involved in several concurrent operations. Range Scheduling, administering a priority system set up by the Department of Defense, has the final voice on all PRM support

operations, and assigns times and areas for each of them.

The schedule board, a semicircular, lighted plexiglass panel, is designed to accommodate records of all operations requiring PMR support as much as two weeks in advance. In turn, the closed circuit TV transmits a picture of the board to a scheduling conference room. Here, prospective Range users desiring PMR support meet weekly to schedule their respective operations. Viewing the board on TV allows them to submit proposed schedules for their operations which will fit in with activities already slated, make and observe changes, and keep conference time to a minimum. Data processing machines help keep things straight too, and branch scheduling offices at Point Arguello; Kaneohe Bay, Hawaii; and Kwajalein in the Marshall Islands lend added support.

To keep interested authorities up to date on all of these goings-on, Range Scheduling maintains direct lines to the Federal Aviation Agency, Los Angeles; the Naval Missile Facility, Point Arguello; Washington, D. C.; Vandenberg Air Force Base, Calif.; Cape Canaveral, Fla.; and other space and astronautic bureaus. Teletype lines cover downrange facilities, and also link them with foreign activities such as the Woomera Rocket Range in Australia.



DATA PROCESSING machines in use at the Pacific Missile Range Headquarters help keep things straight.

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★

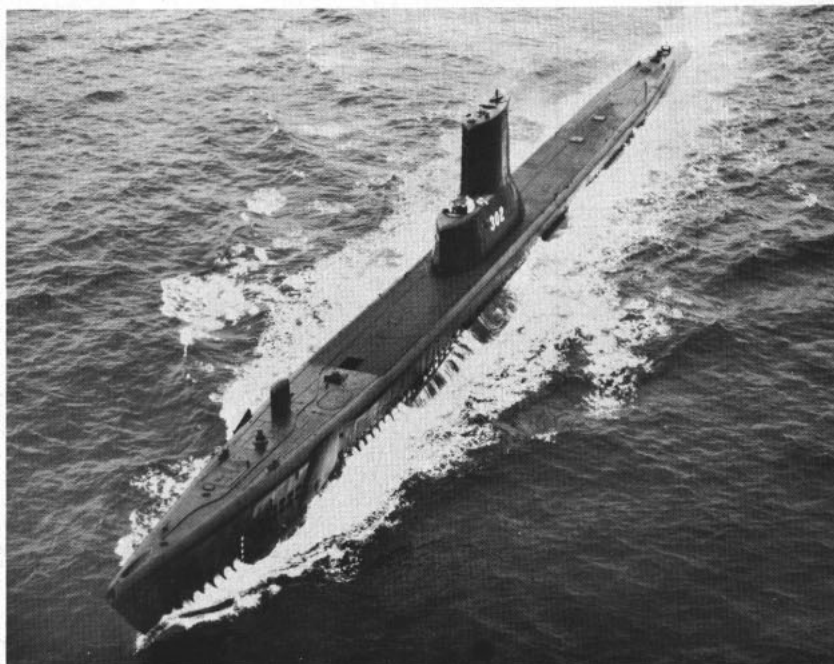
DesRon 36 Gets Around

Not all men who join the Navy get the opportunity to live up to that slogan on the recruiting posters which ends "and see the world." If you're really hot to visit some of those faraway places with the strange sounding names, however, you might consider requesting duty with Destroyer Squadron 36 — an outfit that really gets around.

Soon after joining Task Group Bravo, a crack antisubmarine warfare unit headed by Commander Carrier Division 14 in the aircraft carrier *uss Wasp* (CVS 18), a little over a year ago, for example, two DESRON 36 ships — the escort destroyers *R. L. Wilson* (DDE 847) and *Damato* (DDE 871) — chased, overtook and finally escorted the Portuguese ship *Santa Maria* (which had been boarded and captured by raiders on the high seas) to Recife, Brazil. Then the entire squadron joined up to visit Boston, *Wasp's* home port, before taking off for a joint Canadian - U.S. exercise off Nova Scotia.

A short while later escort destroyer *New* (DDE 818) departed for South Africa on a six-month Amity cruise, which included stops at several ports in Spain, Africa and neighboring islands. While *New* was enjoying this independent duty assignment, the escort destroyers *Holder* (DDE 819), *Rich* (DDE 820) and *R. A. Owens* (DDE 827) plus *R. L. Wilson* and *Damato*, joined *Wasp* on a midshipman training cruise to the Mediterranean. Operating with the Sixth Fleet, they visited Barcelona, Spain; Genoa, San Remo and La Spezia, Italy; Cannes, France; Sicily and Sardinia. Meanwhile, escort destroyer *Basilone* (DDE 824) carried another group of midshipmen on a training cruise to Quebec.

Autumn of 1961 found the entire squadron reunited once more in Norfolk. It was here that the destroyer *McNair* (DD 679), reactivated from the Reserve Fleet and complete with a Ready Reserve crew called to active duty from the Philadelphia, Pa., area, joined the squadron. *McNair* soon steamed south to Guantanamo Bay, Cuba,



MANY TIMES DOWN—USS *Sabalo* (SS 302) celebrated her 3000th dive this summer while operating off the southern coast of Japan.

for refresher training, then joined other Second Fleet units patrolling off the shores of the Dominican Republic. Other DESRON 36 ships, meanwhile, put in to New York City for a short stay.

Early 1962 found DESRON 36 deployed from Florida to Bermuda, participating in one of the early attempts to send Lieutenant Colonel John Glenn into orbit around the earth. Two weeks of tender availability followed; then it was back to the Bermuda area once more in mid-February for Lieutenant Colonel

Glenn's successful flight aboard the space capsule *Friendship Seven*.

Then it was off to Portsmouth, England, on the first leg of Task Group Bravo's spring deployment to northern Europe. Tours to London, Winchester, Salisbury, Southampton and Stonehenge gave DESRON 36 sailors a chance to absorb much of the culture and hospitality of the British Isles, while later stops were also scheduled for Rotterdam and The Hague in the Netherlands; Brussels, Belgium; and major ports in Norway, Scotland and Ireland.

YESTERDAY'S NAVY



On 3 Aug 1886 construction of USS *Maine* was authorized. On 9 Aug 1815 Tripoli agreed to end its raids on American shipping after a show of force by Commodore Stephen Decatur's squadron. On 15 Aug 1944 an Allied naval force landed U.S. and French troops in southern France. On 19 Aug 1812 USS *Constitution* defeated HMS *Guerriere* in a frigate duel southeast of Halifax. On 31 Aug 1842 Congress established the Bureaus of Yards and Docks; Construction, Equipment and Recruiting; Provisions and Clothing; Ordnance and Hydrography; and Medicine and Surgery.

From SN to LTJG on Same Ship

When LTJG Joseph J. Harnadek, USN, received a set of transfer orders from the oceanographic survey ship *uss San Pablo* (AGS 30) recently, it wound up more than five years of service, spread over two separate tours, for him aboard that ship.

For LTJG Harnadek, however, detachment from *San Pablo* meant more than the normal wrench almost anyone would feel at the thought of leaving a ship which had been home for that much of his life. *San Pablo*, you see, has also been a lucky ship for him.

During his first tour aboard—a three-and-a-half-year stretch from 1951-54—he made every rate from seaman to quartermaster first class. He left *San Pablo* for a considerable spell then and in 1960, while serving in *uss Camp* (DER 251), he was commissioned ensign.

Jaygee Harnadek returned to *San Pablo* in late 1960, and during his current tour he not only received his promotion to LTJG, but has also been administratively advanced to chief quartermaster.

Mr. Harnadek's present orders call for him to report to the Fleet minesweeper *uss Prowess* (MSF 280) as O-in-C. It's a cinch, though, that he'll always have a soft spot for *San Pablo*.

Hydrofoil Landing Craft

The Navy gave a public demonstration of the *Highlander*, its new LCVP(H) (Landing Craft Vehicle Personnel, Hydrofoil), which is capable of traveling in excess of 35



QUEEN of Seattle Sea Fair, Linda Jewell, pays call on RADM Nels C. Johnson on board *USS Estes* (AGC 12).

knots—three times the speed of its World War II counterpart.

The new *Highlander* is 40 feet long and 29 feet wide with its foils lowered. When the foils are retracted, it is 14 feet wide. With a full 6000-pound payload, the craft weighs 28,000 pounds.

The boat is powered by two 275hp engines and all controls are hydraulically actuated, permitting it to be operated with a minimum of effort and training. In case of hydraulic failure, alternate mechanical systems are available.

The new craft is being assigned to the amphibious forces to further evaluate its capability and suitability as a cargo-personnel carrier and swimmer recovery craft.

Carrier Pilots Go on TV

Closed circuit television has been installed in the carriers *uss Kitty Hawk* (CVA 63) and *Coral Sea* (CVA 43) to assist pilots and landing signal officers during qualification flights. The system is called PLAT (short for Pilot/LSO Landing Aid Television).

PLAT records each landing on video tape, playbacks of which are used to evaluate pilot performances. Also, the "live" TV picture of the plane coming in for an arrested landing assists the LSO in talking the pilot down safely.

PLAT is comprised of three TV cameras and recording equipment. One camera is located in the centerline of the carrier's flight deck about 300 feet from the last arresting wire. (Some redesigning of deck fixtures was necessary to eliminate the possibility of aircraft tail hooks ripping off the camera cover.)

The lens of the deck camera is separated from other components by a periscope-like device which is stabilized by signals from the ship optical landing system. The camera is immune to shock and vibration, and can be used in day or night operations.

A second camera focuses on control room dials which indicate time, date, radar evaluation of flight speed, and wind velocity, all of which are added to the picture of the aircraft which is viewed in PLAT Control.

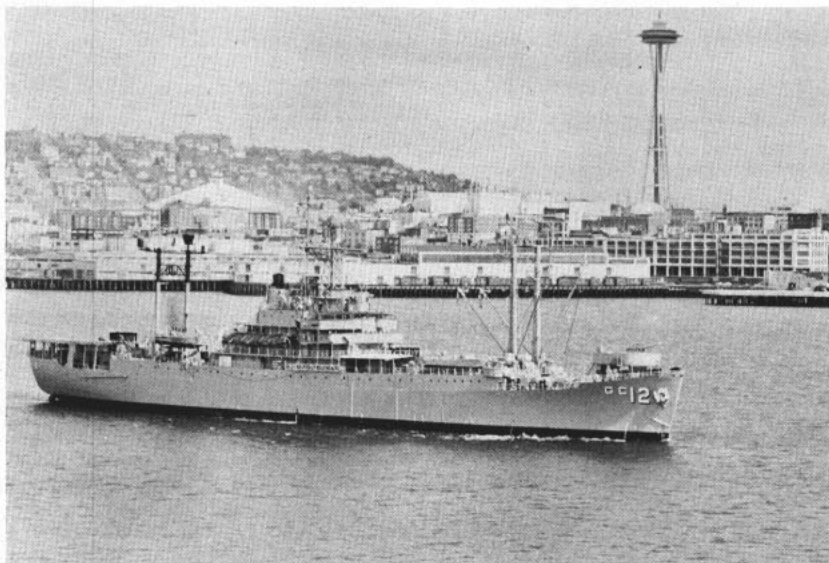
The third camera—equipped with a zoom lens for close-ups of flight deck activity—is located in the island structure. Normally, this camera follows the aircraft after it passes over the centerline camera, zooms in for a close-up of the nose number, and follows the arresting wire back to its sheaves.

Going to the World's Fair?

If you intend to visit the Seattle World's Fair this summer or fall, plan to wear your uniform. It will save you some money.

World's Fair officials have announced that all U. S. and visiting foreign military personnel in uniform will be admitted to the fairgrounds for one dollar—half of the regular admission price.

The reduced admission price *does not* apply to any dependents and/or guests accompanying you—they will have to pay the regular freight. And remember, you must be in uniform to take advantage of the special rate.



FAIR STEAMING—*USS Estes* (AGC 12) arrives at Seattle, Wash., for World's Fair. The 600-foot 'space needle' stands in the background.

Ninth Ballistic Missile Sub

The Navy's Fleet ballistic missile submarine, *uss John Marshall* (SSBN 661) was commissioned in May at Newport News. Two other FBM subs have been launched and 18 are either under construction or authorized.

The new submarine was named for Chief Justice John Marshall who served on the bench of the Supreme Court from 1801 to 1835—the longest term as Chief Justice in the history of the court.

Chief Justice Marshall was instrumental in establishing many of the legal procedures of the United States and was particularly influential in establishing the authority of the national government over that of the individual states.

John Marshall is an *Ethan Allen*-class submarine. She is 410 feet long and displaces 6900 tons. She is, of course, designed to fire *Polaris* missiles.

Oceanographic Research Ships

Two of the first United States Navy ships constructed especially for oceanographic research have been launched at Jacksonville, Fla., and Sturgeon Bay, Wis. They are *Robert T. Conrad* (AGOR 3) and *James M. Gilliss* (AGOR 4).

Both ships are 209 feet long and can carry 22 officers and enlisted men in addition to 15 scientists. *Conrad* will be operated, under contract to the Office of Naval Research (ONR), by the Lamont Geological Observatory of Columbia University.

The Military Sea Transportation Service will operate *Gilliss*. The U.S. Navy Hydrographic Office will provide *Gilliss* with scientists to conduct studies of underwater acoustics for the U.S. Naval Underwater Sound Laboratory's East Coast laboratories.

The ships will, among other things, study the effects of the ocean environment on sound transmission and on scientific and naval instruments.

Conrad is named for the late Captain Robert D. Conrad, USN, who pioneered policies and research programs for ONR.

Gilliss is named for Captain James M. Gilliss, USN, who participated in the planning and establishment of the first Naval Observatory in 1844. He also was an early superintendent of the Observatory.

The new *Gilliss* is the second ship to bear the name, the first being a survey ship (AGS-13) which saw naval duty from 1943 to 1958.



Do You Have a Photogenic Ship?

Take a look at the picture here and the one on the inside back cover.

Nice pictures, aren't they? The sort every photographer wishes he had done.

If you should ever produce photos of comparable excellence, you and your ship will have a chance at immortality of a sort. The Curator of the Navy is looking eagerly for such photos of all types of ships so that they will be properly remembered in the future.

He receives dozens of requests every month for photographs of ships. Some of these requests come from former crew members or surviving families. Others are requests for use in books, magazine articles, museums and school displays and exhibits. The reasons for such requests are limited only by man's imagination and needs.

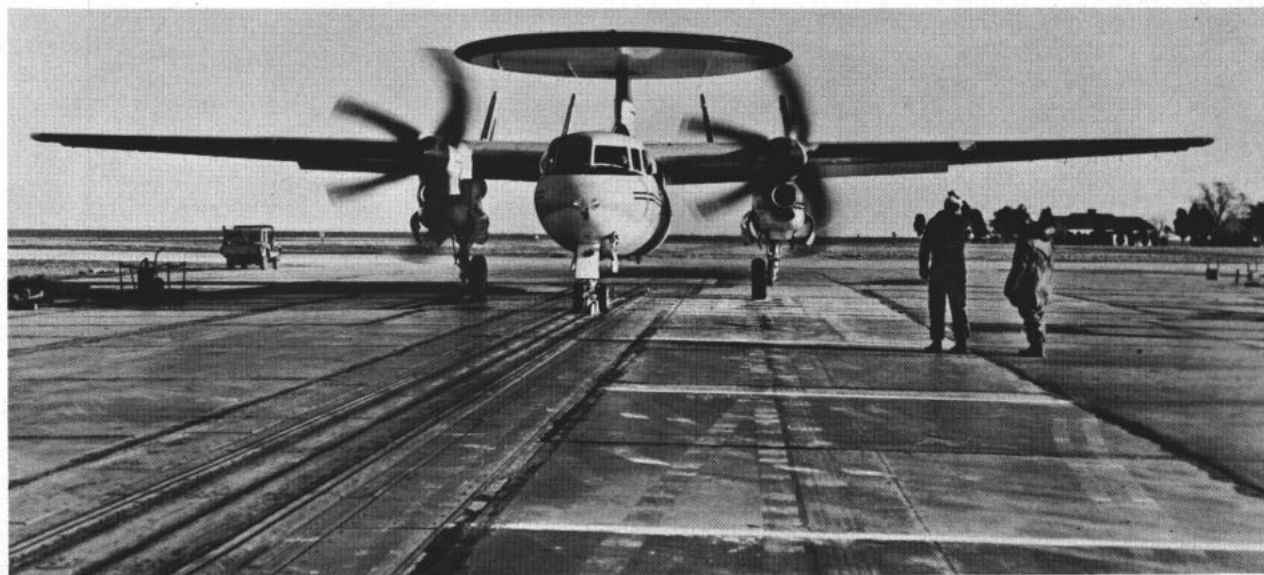
Several recent requests have

been filled for crews of ships named for historic ships of the past. (*Enterprise* herself is a case in point.)

Photographs of your ship, especially during significant events such as visits to foreign ports, humanitarian relief actions, or similar incidents, should be sent to the Curator for the Department of the Navy, Naval History Division, Navy Department, Washington 25, D. C.

And, of course, while you're at it, don't forget to send 8 by 10 glossy copies of your photos along to Editor, ALL HANDS, Room 1809, Arlington Annex, Navy Dept., Washington 25, D. C. This will enable us to show to the rest of the Fleet what a fine ship or station or crew you're associated with.

And, finally, remember the rules regarding the forwarding of negatives to the Naval Photographic Center, Anacostia, D. C.



ON THE NOSE—Navy's W2F-1 is used in testing of new nose-tow catapult system at NAS Patuxent River, Md.

Lex Leaves the Pacific

uss *Lexington* (CVA 16), after 19 years in the Pacific, has changed her address to Pensacola, Fla. Her former home berth at San Diego is being filled by *uss Constellation* (CVA 64).

Lexington appeared in the Pacific in 1943 to take the place of her namesake (CV 2) which was sunk by the Japanese at the Battle of the Coral Sea.

In 1955, *Lexington* was recommissioned at Puget Sound Naval Shipyard after she was fitted with an angled flight deck, steam catapults and mirror landing systems. She returned to the Pacific that same year.

As a member of the Seventh Fleet, she alternated between carrier qualifications off the west coast and deployment in the Far East.

New Sub Tender

uss *Hunley* (AS 31), the first submarine tender built by the U.S. Navy since World War II, and the first in history built from the keel up to service and maintain Fleet ballistic missile submarines, was commissioned in mid-June at Newport News, Va.

The new sub tender is the second ship to bear the name *Hunley*. The first was a Confederate submarine named for its financial backer, wealthy Tennessean Horace L. Hunley. In February 1864, *Hunley* became the first submersible to sink another ship—the Union sloop *Housatonic* in Charleston harbor.

Six hundred feet long, and weighing 18,300 tons, *Hunley* is capable

of making any submarine repair other than a major overhaul, including servicing and maintaining the nuclear power plants of the *Polaris*-firing submarines. She is commanded by Capt. Douglas N. Syverson, USN, and is homeported at Norfolk, Va.

Navy Amphibs Train Army

A series of training operations now underway at the Amphibious Base in Little Creek, Va., will provide instruction and practical work in amphibious assault techniques to improve the amphibious capabilities of today's Army.

The operations—divided into 10 segments—commenced in May and will continue through mid-October.



FAMILY of Max Lemasters, ACCM, USN, arrives in England. They were the first to enter Europe since the travel ban was lifted.

It is the largest joint service training program ever conducted at Little Creek. Altogether, approximately 20,000 Army troops will participate.

Army battle groups comprised of combat engineers, infantry, artillery and armor personnel are participating.

First, the soldiers concentrate on the preparations necessary both ashore and afloat for a successful amphibious assault landing. Shore-based training includes vehicle waterproofing, equipment stowage, indoctrination in ship characteristics, net embarkation, assault boat landing, logistical support techniques, and shore party organization.

In the afloat phase, the soldiers are introduced to shipboard life and are provided with on-the-spot instruction in the embarkation procedures necessary for an effective amphibious assault landing.

Veteran Navy and Marine Corps amphibious experts are instructing the soldiers in "hit the beach" techniques. Each of the 10 training periods is climaxed with an assault on Little Creek beach areas.

The first wave of soldiers involved in the training—2000 officers and men of the 2nd Infantry Division, Fort Benning, Ga.—arrived at Little Creek on 12 May. Other Fort Benning battle groups totaling 8000 men followed during June and July.

Still more Army units scheduled for the amphibious training are due later this year from Fort Riley, Kans.; Fort Bragg, N. C.; Fort Sill, Okla.; Fort Hood, Texas; and Fort Campbell, Ky., in increments of 2000.

Grant, Jackson, Greene & Co.

Three Fleet ballistic missile submarines which are now abuilding have been assigned names. They are SSBN 631 which will be named *Ulysses S. Grant*, SSBN 634 which will be christened *Stonewall Jackson* and SSBN 636 which will bear the name *Nathanael Greene*.

When they are commissioned, they will become the 24th, 25th and 26th FBM submarines in the Fleet.

Ulysses S. Grant will, of course, bear the name of a one-time colonel of the 21st Illinois Volunteer Infantry. Later, his tenacity in pursuing the enemy at Shiloh and elsewhere prompted President Lincoln to place him in command of all Union forces. He became the 18th President of the United States in 1868.

Stonewall Jackson will bear the name of the Confederate general and tactician who earned his nickname from the words of Brigadier General Bee who, during a battle, encouraged his men by pointing out Jackson, "standing like a stone wall."

Nathanael Greene was the general whose dividing and eluding tactics contributed to the British defeat by forcing them to pay a price they could ill afford during the Middle-Atlantic and Southern campaigns of the Revolution.

All the new submarines will be in the *Lafayette* (SSBN 616) class and will be 425 feet long and displace 7000 tons.

All three FBM subs are scheduled to join the Fleet late in 1964.

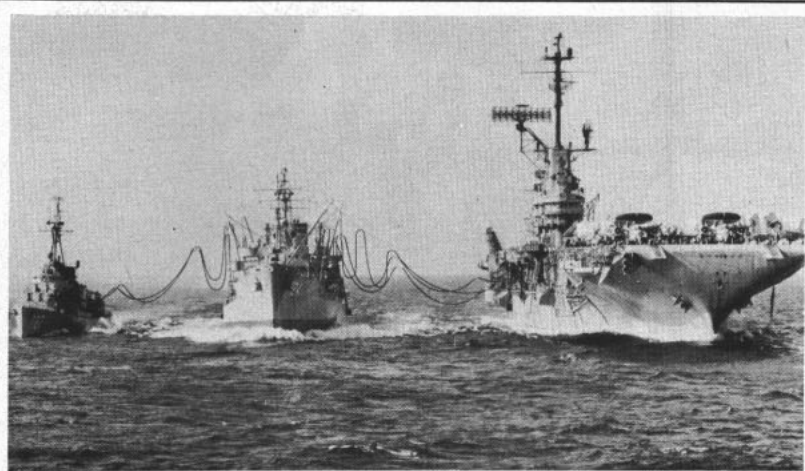
First Combat Store Ship

The keel was laid in San Diego for the Navy's first combat store ship (AFS 1). The new ship is scheduled for delivery to the Navy late in 1963. A sister ship will be delivered about June of the following year.

Both ships follow a new design and will be 581 feet long and 79 feet wide. They will be equipped with automatic tensioning devices which will maintain taut transfer lines between the AFS and the ship being replenished.

The ships will displace 16,100 tons fully loaded and will carry helicopters for replenishment of task force ships spread over a wide area.

Eventually the new floating warehouses are expected to replace the store ships (AF), general store issue ships (AKS), and aviation supply ships (AVS) now used in most underway replenishment operations.



TWO SHIPS are refueled at the same time by USS *Platte* (AO 24).

Oilers Have Busy Job Feeding the Fleet

A Fleet oiler is to a ship at sea what an isolated service station is to a motorist whose engine is sputtering on a lonesome stretch of road.

Take the Pacific Fleet, for example; it embraces more than 400 ships and 3000 aircraft. Fleet oilers and gasoline tankers keep ships and planes from running out of the vital stuff at embarrassing moments and, in mid-Pacific, almost any moment would be embarrassing.

Several varieties of oilers now replenish Pacific Fleet ships at sea. The smallest, *Kennebec* (AO 36) class, were pulled out of mothballs during the past year, dusted off and put back to work. Each ship of her class is about 501 feet long and displaces about 21,000 tons fully loaded. Despite their size, they carry nearly as much fuel as some of their slightly larger sister ships in

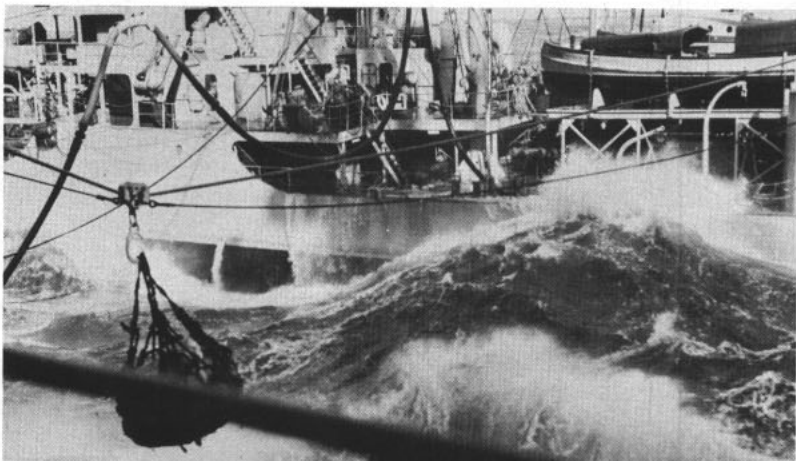
the *Mattaponi* (AO 41) class.

More numerous are the oilers displacing 25,000 tons fully loaded. Each of these is 553 feet long, is armed with 5-inch/38 and 3-inch/50 guns, and carries more than four million gallons of fuel.

The largest class is represented by three giants, each of which displaces 38,000 tons fully loaded, and is about 655 feet long. An oiler in this class can carry more than seven million gallons of fuel.

Tankers carrying gasoline are smaller than oilers and consequently carry less fuel. They usually transport their cargoes from port to port rather than refuel at sea.

Regardless of its size, the sight of an oiler bobbing about on the briny blue is a pretty sweet sight to the captain of any ship whose fuel gauge is creeping up on the "E," which, of course, means "empty."



FLEET OILER in rough seas sends both fuel and cargo to carrier.



LONG TIME GONE—USS *Saint Paul* (CA 73) heads for home port at San Diego, Calif., after more than three years in Western Pacific.

Navy Astronautics Group

The U.S. Navy's first space satellite command, the Navy Astronautics Group, has been established at the Pacific Missile Range Headquarters, Point Mugu, Calif. It will operate the navigational satellite system which is being developed by the Navy for the Department of Defense.

The Group will maintain and operate certain astronautics systems

which will include spacecraft, ground-based components and sub-systems. The new command will eventually have a satellite command and injection station, computer center, operations control center and satellite tracking facility at Point Mugu. Other command tracking facilities will be located at Winter Harbor, Maine; Minneapolis, Minn.; and Wahiawa, on Oahu, Hawaii.

Navy Pilots Pile Up Records in Phantom II Jet

Navy test pilots have swooshed the F4H *Phantom II* jet fighter to eight new world aviation speed records in the "time-to-climb" category. The records were chalked up by five pilots—four Navy pilots and one Marine—during speed trials at the Naval Air Stations at Point Mugu, Calif., and Brunswick, Maine. The climbs were to altitudes of 3000, 6000, 9000, 12,000, 15,000, 20,000, 25,000, and 30,000 meters. Here's how they stack up:

Altitude in Meters	Time-to-Climb (in seconds)	Pilot
3000 (9842.5 feet)	34.523	LCDR J. W. Young, USN
6000 (19,685 feet)	48.787	CDR D. M. Longton, USN
9000 (29,527.5 feet)	61.629	LTCOL W. C. McGraw, Jr., USMC
12,000 (39,370 feet)	77.156	LTCOL W. C. McGraw, Jr., USMC
15,000 (49,212.5 feet)	114.548	LCDR D. W. Nordberg, USN
20,000 (65,620 feet)	178.5	LCDR F. T. Brown, USN
25,000 (82,025 feet)	230	LCDR J. W. Young, USN
30,000 (98,425 feet)	371.43	LCDR D. W. Nordberg, USN

The Navy has submitted the new time-to-climb statistics to the Federation Aeronautique Internationale—the Paris-based organization which governs world aviation records. If accepted, the marks will erase the course times set by the Air Force now recognized as records.

Five other world speed marks have been claimed by the *Phantom II*—including the straightway speed record of 1606.3 miles an hour. The sleek fighter has also set records in the 100- and 500-kilometer closed courses; altitude for sustained flight; three-kilometer run; and U.S. coast-to-coast time of two hours, 48 minutes.

The *Phantom II* is powered by two turbojet engines which can develop more than 32,000 pounds of thrust (rough equivalent: 120,000 hp.).

Slick features of the *Phantom II* are her 45-degree swept-back wings and a horizontal stabilizer that slopes downward at a 23-degree angle. The jet is 58 feet in length and has a wingspan of 38 feet, five inches.

Orion Reports for Duty

The first three of 22 *Orion* anti-submarine aircraft scheduled to begin squadron duty this year were delivered to NAS Patuxent River, Md., in July.

The new *Orion* carries a 10-man crew and flies at speeds up to 450 miles per hour. At first it will supplement, then replace, older models of the veteran P2V *Neptune*.

Since April, six *Orion* sub-killers have been under test both over land and over the ocean. A Naval Weapons Evaluation Force team has made flights over New Mexico desert armament ranges to make bomb and torpedo drops and fire rockets in a complete check-out of *Orion's* weapons delivery system.

Two of the Patuxent-based planes were given maintenance, ground support and servicing tests. Other *Orions*, using science's most advanced electronic, sonic and magnetic gear, were used to test the plane's underwater detection capabilities.

Navy Launches FLIP

A new type of Navy oceanographic research vessel has been launched. Called FLIP, the craft can literally flip from a horizontal to a vertical position while at sea.

In a vertical position FLIP will provide the stable platform long needed by oceanographers, particularly in rough seas.

It will be used for studies of wave motion, marine biology, internal waves, sound waves and other phenomena in the ocean. It will be used initially for studies of sound waves.

The vessel is towed to sea in a horizontal position then rotated into a vertical position by flooding its long aft section with sea water. Only its four-story bow section then remains above water. To return the vessel to a horizontal position, high pressure air blows the water out. Subcompartmentation of the ballast tanks and about 70 tons of concrete placed along the horizontal keel permit the vessel to return to a horizontal position.

The craft is 355 feet long and weighs about 600 tons. In the vertical position, the research laboratories, living quarters and engine room are above water. Two watertight cylindrical tubes permit the crew to descend to 150 feet under water.

There are accommodations for four persons and supplies can be carried from one to two weeks.



CREWLESS—Fire-swept SS *Iquitos* from Peru drifts in the Pacific some 4000 miles from where abandoned.

Navy Flight Crew Finds Mystery Ship

But tell me, tell me! speak again,

Thy soft response renewing—
What makes that ship drive on so fast?
What is the ocean doing?

—“The Rime of the Ancient Mariner”
Salty sailors will tell you that nothing much is impossible on the high seas. The vast Pacific has recently yielded up yet another example.

When a modern *Flying Dutchman* of sorts (sans crew) popped up in the middle of the restricted nuclear test area near Christmas Island the past spring, it first showed up as an unidentified blip on the radarscope of a patrolling P2V. That blip eventually turned out to be a ship—a real mystery ship.

It was, it developed, the Peruvian cargo ship ss *Iquitos*—but that just couldn't be. *Iquitos* didn't have any business being within thousands of miles of that area.

She had, you see, caught fire and started to sink some 300 miles southeast of Acapulco, Mexico, late last November. Her 36-man crew had abandoned ship, and were subsequently rescued by a passing British freighter. *Iquitos*, naturally, was assumed to have sunk.

Still, undeniably, there was the ship—and Flight Crew No. Six, a unit of Naval Reserve Patrol Squadron 872, wheeled in to investigate the strange blip.

Flight Crew Six, of course, had never heard of *Iquitos*. Upon visually sighting their find, they at first believed her to have been recently

abandoned, since she was still burning. However, after circling the rusted and fire-scarred vessel, and photographing her devastated superstructure, they were able to determine that there were no survivors in the immediate area.

Back at the base, VP-872 dispatched its Sea-Air Rescue P2V to assist if necessary. Within minutes, it was headed for the scene, ready to drop survival equipment. Meanwhile, Flight Crew Six flew upwind from *Iquitos*, and began to carry out a survival search pattern.

In the meantime, the destroyer uss *Gurke* (DD 783), also notified of the discovery, had reached the scene, and identified the burning derelict as *Iquitos*. *Gurke* also verified the fact that there was no one on board the craft, and reported her as listing 20 degrees, unsalvageable, and a menace to navigation. This report was sent back to Pearl Harbor, where

the strange facts of the voyage of *Iquitos*, and the true fate of her crew, were ascertained. *Gurke* was ordered to sink the drifting wreck—and did so.

Now Navy Headquarters, Pearl Harbor, is a pretty hardheaded, unfanciful-type outfit—and, sparing the romanticism, and in the absence of any evidence to the contrary (like a murdered albatross, maybe) they've gone along with what seems to be the only possible explanation for *Iquitos*' presence near Christmas Island.

Instead of sinking shortly after her crew abandoned her, the smoldering hulk apparently caught the same Humboldt Current which carried the raft *Kon Tiki* on its epic voyage from the coast of South America to the Polynesian islands some years ago. She had drifted, undiscovered and still burning, some four months and nearly 4000 miles across the Pacific.

Recalled to active status during the Berlin-crisis buildup last fall, VP-872 was the only Naval Reserve squadron assigned to the mid-Pacific nuclear testing program. For at least one of its flight crews, the high point of their tour will always be the discovery of a modern *Flying Dutchman* in the middle of the broad Pacific.

No one can really quarrel with Pearl's explanation, but sometimes we can't help but wish it wasn't quite so realistic. A mutiny and a heroine is, at least, indicated.



UNSAUVAGEABLE—SS *Iquitos* was ruled a menace to navigation and sunk by U.S. destroyer's gunfire.

Brief news items about other branches of the armed services.

WEATHER REPORTING in the western Pacific—of deep interest to every U. S. Navy ship in the area—is assigned to a variety of units and stations both ashore and afloat. One of the most widely traveled and versatile of the lot is the U. S. Coast Guard Cutter *Matagorda* (WAVP 373).

Equipped with modern radar and communications equipment, *Matagorda* is manned by 12 officers, 135 enlisted men and four civilian meteorologists. She also carries a public health medical officer.

When she's about her weather information-gathering chores in WestPac, *Matagorda* sends huge, helium-filled balloons aloft every six hours. A radar reflector attached to the balloon enables the ship's radar to track the balloon, thus determining the direction and velocity of the wind at various altitudes. In addition, a radio transmitter containing sensing elements which pick up and transmit the temperature and humidity of the air is suspended from each balloon. All of this information is received and recorded by the ship, transmitted to the U. S. Weather Bureau in Honolulu, and, finally, distributed throughout the Pacific.

Besides serving as a floating weather station, navigational checkpoint, and communications ship for trans-Pacific aircraft, *Matagorda* also participates in the general search and rescue program administered by the 14th Coast Guard District, Honolulu.

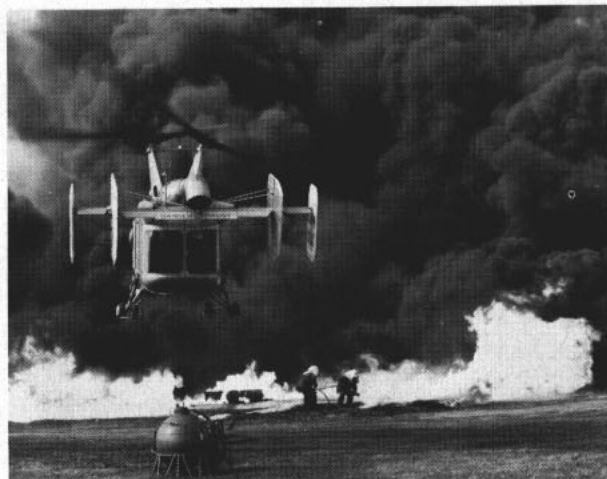
Formerly a Navy seaplane tender, *Matagorda* operated from the Atlantic to the Panama Canal Zone during World War II. After the war she joined the mothball fleet at Orange, Tex., for a spell and then, in 1949, shed her Navy grey for Coast Guard white. She is homeported at Sand Island, Honolulu.

★ ★ ★

AN AIR FORCE TRANSPORT plane, specially fitted as a crop duster, has helped bring under control a plague of locusts which threatened crops in Iran and Afghanistan. The plane, a C-123 based at Pope Air Force Base, N. C., was fitted with a 1000-gallon spray tank for emergency service last May when the governments of the two Mid-



FLOATING WEATHER STATION—USCG's *Matagorda* (WAVP 373) gathers data near Ala Moana, Hawaii.



LIFESAVER—USAF H-43B *Huskie* helicopter hovers as Air Force personnel move into flaming 'crash' area.

dle East countries requested help in combating desert locusts which were threatening farmlands and orchards.

The aircraft arrived in Iran on 10 May and began spray operations in the Isfahan and Dezful areas. On 24 May the duster departed for Afghanistan and conducted spray operations there until 2 June.

In all, the C-123, operated by five Air Force officers and two enlisted airmen, sprayed more than 17,000 acres.

★ ★ ★

NASA, the National Aeronautics and Space Administration, will soon have a new and larger spacecraft. Work has begun on the two-man *Gemini* space vehicle which will one day replace the one-man *Mercury* space capsule. *Gemini* is larger in both length and girth and has 50 per cent more cabin space than the *Mercury* capsule. It also will weigh two or three times more than NASA's previous manned capsules.

With *Gemini*, NASA hopes to pioneer a new type of space exploration. *Gemini* is designed to hook up to another space vehicle while in orbit. Two men will be able to orbit the earth for a week or more in *Gemini*. This will not only provide time to maneuver into rendezvous position with another space vehicle, but will also provide pilot training for future NASA circumlunar flights. Prolonged orbital flights will also show how man withstands weightlessness for extended periods, as well as give *Gemini's* crew time to perform a variety of scientific investigations.

Gemini will look much like a large *Mercury* capsule, except that the 16-foot escape tower will not be used in *Gemini*. Instead, ejection seats will be installed as a means of escape during lift-off and re-entry. The outside of the capsule is not the only place where *Gemini* and *Mercury* have been crossbred. Time necessary for development of the two-man vehicle has been reduced by using many of the flight-proven *Mercury* systems. The inside of the *Gemini* capsule is considerably different from that of the *Mercury* capsule. Many of the flight systems will be placed outside the pressurized cabin and many major components will be mounted on removable

shelves. This should reduce maintenance and checkout time.

A modified *Titan II* launch vehicle is slated to boost the *Gemini* capsule into orbit for its rendezvous with a target, probably an *Agena* stage similar to those used in *Ranger* and *Discoverer* projects.

This *Agena* stage will be boosted into orbit by an *Atlas* missile. As both vehicles orbit in proximity, the astronauts will maneuver the *Gemini* capsule into position to rendezvous with the *Agena* stage. Ground control will be able to adjust the *Agena's* orbital path, if necessary, so the two crafts can be joined while in orbit.

Gemini ties in directly with NASA's plan to place a man on the moon in 1970. The rendezvous in orbit is one of the projected plans that could lead to such an accomplishment. Another plan calls for the *Nova* booster, with its millions of pounds of thrust, to launch a non-stop flight to the moon.

★ ★ ★

THE AIR FORCE is currently operating ships to provide instrumentation support to missile and space programs on the Air Force Atlantic Missile Range. Ships will be used by the Air Force where islands or land-based instrumentation sites are not available.

New requirements of this nature are being met by the addition of two 520-foot World War II troop transports. These ships are now being modified for their new job and are described as follows:

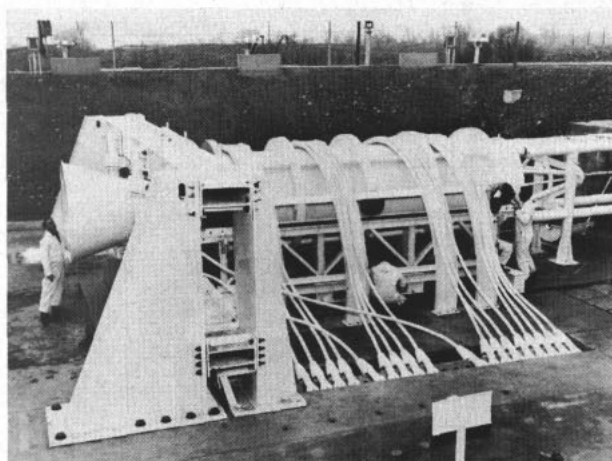
Each displaces 14,300 tons and carries a crew of 100 with an instrumentation group about the same size.

The ships are part of an "Advanced Range Instrumentation Ships Program."

They carry C-band radar, complete telemetry, communications, meteorological and control center systems.

They will also have stabilization and navigation systems, AMR-synchronized timing equipment and vehicle command control systems, in addition to continuous wave transmitters.

The program calls for four additional ships to be used as support vessels, equipped with L, C and X band radars, plus range and range-rate systems.



TWENTY-TON solid fuel experimental motor is readied for static test under USAF research program.

THE ARMY HAS STEPPED up its medical research and development activities in an effort to provide better medical support for soldiers under all kinds of battle conditions. A long list of projects on the study agenda of the Army's Medical Research and Development Command will be worked on during a five-year program. Among other things:

- New drugs and vaccines are being tested with a view towards providing soldiers in remote areas with built-in protection against a wide variety of diseases.

- New combat surgery techniques are aimed at reducing deaths and disabilities resulting from wounds, infections, trauma and shock.

- Psychiatrists are being called on to study the soldiers' mental processes and help them adjust to modern combat environments.

- A compound to protect soldiers from the effects of ionizing radiation is being studied.

- New, easily transportable medical field equipment and supplies are under development.

★ ★ ★



PILOT MODEL of Army's 105-mm howitzer, the XM 104, represents new concept in self-propelled artillery.

PILOT MODELS of a tank-like vehicle which can operate in water as well as on land are under construction by the Army Ordnance Tank Automotive Command in Detroit, Mich. The vehicle—designated XM-104—is built around a 105mm howitzer. The Army describes the weapon as a "heavyweight puncher with featherweight mobility."

The XM-104 is tracked for land operations and amphibious for negotiating rivers and lakes. The machine weighs 6400 pounds, carries a four-man crew, and can travel at 35 miles an hour. The weapon is completely mobile—it can be delivered to battle areas by helicopter, dropped by parachute, or delivered by transport plane. Conceivably, the XM-104 would provide ground troops with an artillery piece which can go into action any place, any time.

Test models of the weapon now under construction must be evaluated and approved by the Army before full-scale production is ordered.

THE BULLETIN BOARD

Family Protection Plan Really Helps To Protect Family

IF YOU'RE APPROACHING retirement or transfer to the Fleet Reserve, now's the time to check into the benefits of the Retired Serviceman's Family Protection Plan. Under it you may elect to draw a little less retired pay during your lifetime in order to provide a monthly income for your wife and children after your death.

The plan, formerly known as the Uniformed Services Contingency Option Act, has been rewritten. A revised version, which incorporates many changes made late last year, has been distributed to the Fleet in the form of BuPers Inst. 1750.1D. In general, here's how the changes affect you and the FPP:

- If you have three years' service remaining before retirement you may make an original election, a change, or a revocation.

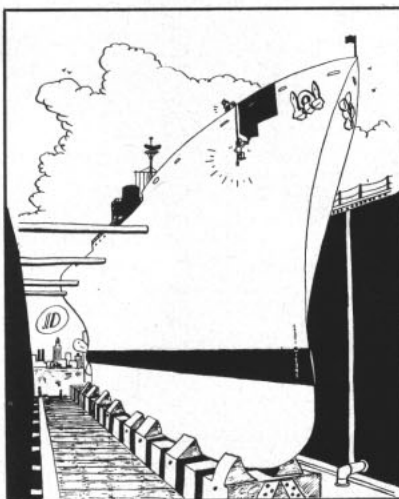
- If your election under FPP is found void for any reason except fraud, it may be corrected anytime within 90 days after you are notified in writing that the election was invalid.

- After you have made a valid election and retired, the Secretary of the Navy may permit you to withdraw from FPP for reasons of severe financial hardship, if your participation would violate equity and good conscience. (The absence of an eligible beneficiary does not in itself constitute sufficient basis for withdrawal.)

- If you have made an election under FPP since 4 Oct 1961, and you retire with physical disability before you complete 18 years' service for pay purposes, then die from a service-connected disability, your beneficiaries will not be eligible for the annuity if they are eligible to receive certain Veterans' Administration benefits. (All premiums you paid into the FPP, however, would be returned to your beneficiaries.)

- You may allocate a part of the annuity to your surviving children who are not the children of your surviving, eligible spouse.

All-Navy Cartoon Contest
John L. Draves, QM2, USN



"After you finish this . . ."

- If you have completed 18 years of service and did not make an FPP election, you may reconsider and still be able to participate.

How It Works

The Family Protection Plan is open to all Navymen and women who expect to receive retired pay (see definitions, page 47). Before you complete 18 years of service you are notified of the benefits of FPP and the deadline for filing your elections. You should be provided a copy of NavPers Form 591, on which you

No Dependents?

You have no dependents? Even so, executing an option under the Retired Serviceman's Family Protection Plan would do no harm, since it would insure your dependents if your status changed while you were still on active duty. Deductions from your pay are not made until you actually retire, and if you still have no dependents by that time, you pay nothing.

either sign up for FPP, stating the options you desire, or return it and state that you do not wish to participate.

If you elect to participate in FPP, the NavPers 591 must be dated, signed, witnessed and delivered to your commanding officer (if you're on active duty), or postmarked (if you're inactive), not later than midnight on the day you complete 18 years' service. If your election is not changed or revoked, it becomes effective when you retire. (You do not pay into FPP until retirement—your contribution is automatically withheld from your retired pay.)

If you do not make an election under FPP before completing 18 years' service, you may sign up later provided you do so at least three years before the date you become entitled to receive retired pay.

Effective 4 Oct 1961, if you retire because of physical disability before completing 18 years' service, and your survivors are eligible for "Death Compensation" or "Dependency and Indemnity Compensation," they would not be eligible to receive an annuity under FPP. All money paid in for the plan would be returned to your survivors.

Options

Under the electives of FPP, you may select one or a combination of four basic options and specify whether your eligible survivors will receive monthly checks in amounts equal to one-half, one-fourth, or one-eighth of the reduced amount of your retired pay.

Option 1 is an annuity for your widow; payable until she dies or remarries.

Option 2 is an annuity for your eligible children; payable until eligibility no longer exists (see definitions).

Option 3 is an annuity payable to your widow and surviving children. Your widow's annuity is payable until she dies or remarries, after which it is paid in equal shares to

surviving children as long as they remain eligible.

Option 4 provides that no further deductions shall be made from your retired pay when, and if, your family becomes ineligible for annuity payments under options 1, 2 and 3. (A tip: option 4 is good protection to have. If you don't elect to include option 4, you will end up paying into FPP for the rest of your life with no returns to survivors. Option 4 increases the cost of your plan only slightly.)

You may elect the annuities under both options 1 and 2, with either one-quarter or one-eighth of your reduced retired pay payable under each. The reduction in your retired pay and the amount of each annuity are determined separately.

You may not elect combinations of options 1 and 3, or options 2 and 3, for any amount. Option 4 may be combined with any or all other options.

If you elect options 1 and 2, and there ceases to be an eligible recipient of the payments under either one, the annuities do not revert to the eligible survivors under the other option, as could be the case in option 3.

Elections, Changes, Revocations

You may change the terms of your original or subsequent elections at any time before retirement. The change becomes effective three years after it is executed, unless you are retired in the meantime. (Special provisions are made for officers retired under the "Hump Law"—see BuPers Inst. 1750.1D.)

At any time before retirement you may change or revoke your previous election. However, the change or revocation must be in effect at least three years before you become eligible to receive retired pay. You could later make another election, as long as you did so at least three years before you would become entitled to receive retired pay.

All elections, changes to elections, or revocations, are submitted on NavPers Form 591. In each case, the original of the form is sent to the Navy Family Allowance Activity in Cleveland, Ohio. A duplicate copy is inserted in your service record and a triplicate copy is retained by you. (Any one of these may be considered sufficient evidence of an election,

These Definitions Will Give You a Clue

Here's a roundup of some of the definitions relating to eligibility under the Retired Serviceman's Family Protection Plan:

- **FPP**—Retired Serviceman's Family Protection Plan. Formerly known as the Uniformed Services Contingency Option Act.

- **Widow**—Can mean widow or widower, depending, of course, on whether you're a Navyman or a woman. Used here, widow means your lawful spouse on the date of retirement with pay.

- **Children**—For FPP eligibility, the word children (or child) means your children who meet the following requirements on the date of your retirement with pay: Legitimate children under 18 years of age and unmarried; stepchildren under 18 years of age who are unmarried and dependent on you for more than one-half their support (stepchild relationship terminates upon the stepparent's divorce from parent spouse, but not upon death of the stepparent); legally adopted children under 18 and unmarried; and unmarried children over 18 who are incapable of self-support because of physical or mental illness that existed before reaching age 18.

- **Years of Service**—The number of years creditable when computing your basic pay.

- **Retired Pay**—This includes re-

tired, retirement, equivalent and retainer pay.

- **Retirement**—Your retirement with eligibility to receive retired pay.

- **Reduced Retired Pay**—The retired pay remaining after the cost of participating in FPP has been subtracted.

- **Change of Election**—A change in the percentage of the reduced amount of your retired pay under any FPP option, or a change in any of the options selected. (Notification of a substitution, deletion or addition of dependents within an option is not a "change," as the election remains in effect for the same class of dependents selected.)

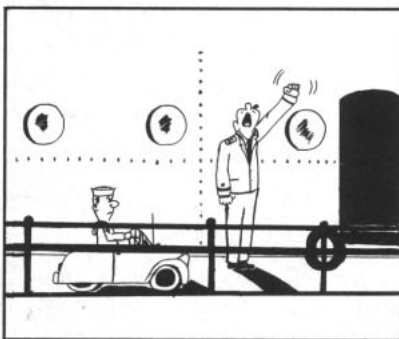
- **Revocation**—A cancellation of a previous election. Unless another election becomes valid, a revocation constitutes withdrawal from FPP.

- **NavPers Form 591**—"Election of Options Under the Retired Serviceman's Family Protection Plan." This is the official Bureau of Naval Personnel form on which all elections under FPP should be submitted. A revised Form 591 (Rev. 4-62) which reflects changes in FPP is now available at forms and publications stocking points. The old 591s (Rev. 6-54) may still be used, but instructions on the back of the forms which do not reflect changes by new laws should be ignored.

change, or revocation, once it has been signed and attested.)

The U. S. Navy Finance Center,

All-Navy Cartoon Contest
James C. McNeill, YN3, USN



"I don't care if it will fit under your rack, you can't keep it aboard."

Cleveland, Ohio, determines the amount of the reduction in your retired pay, based upon tables which scale percentages for appropriate amounts under the options and ages concerned. The tables currently in effect are contained in NavPers 15945A.

Not Deductible

The amount of retired pay withheld after your elections under the FPP become effective is not deductible for Federal Income Tax purposes. Your retired pay is considered "gross income" for taxes, unless it is excluded because of retirement for physical disability.

When you sign up for FPP you are required to provide substantiating evidence regarding dependency

and ages for eligibility. Your dependents should be named at the time of election or as they are acquired. The dependents you name in each option may be changed up to the date you retire, provided the changes involved are limited to the same option. In any case, on the date of your retirement all legal beneficiaries within the option you elect must be indicated.

Payment of Annuities

When the Navy Finance Center receives official notification of your death after retirement, it will forward to your survivors the necessary information and forms for making application for annuity payments. Annuities for children are paid to the guardian, or, if there is no guardian, to the person who has care, custody and control of the children.

If you signed up under the old Contingency Option Act between 1 Nov 1953 and 4 Oct 1961 you are advised to consult BuPers Inst. 1750.1D for a look at how you stand under the new laws. This directive contains a complete rundown on FPP, including special provisions for men who are missing in action or granted retired pay retroactively. It is the official word, and should also be consulted for more details on points listed above.

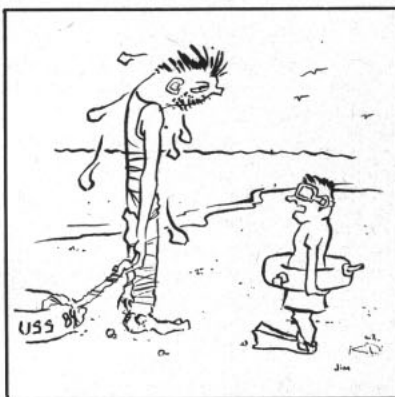
Rules Changed on Voluntary Retirement of Officers

Two changes, which apply to Navy captains and Marine Corps colonels, have been made in the regulations under which warrant and commissioned officers may voluntarily retire after 20 years of active service.

When consistent with service needs, favorable consideration is usually given to retirement applications by officers in the following categories:

- Officers, below flag or general rank, who have 30 years of active service.
- Flag and general officers with 30 years of active service and at least five years in rank.
- Navy captains with at least two years of service in grade (shortened from four years).
- Marine Corps colonels with at least three years of service in grade (also shortened from four years).

All-Navy Cartoon Contest James E. Krause, SN, USNR



"How's the water?"

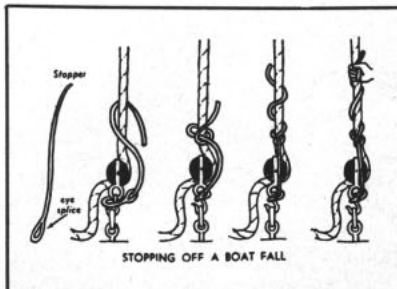
- Officers who have twice failed selection for promotion.
 - Officers who are difficult to assign because they are over age in grade, are in bad health, or whose continued service is inconsistent with national security.
 - Officers having hardship of a compassionate or an unusual financial nature where retirement would alleviate serious personal problems.
- SecNav Inst. 1811.3D, which defines these categories, also points out that officers serve at the pleasure of the President and they have no vested right in retirement after the completion of 20 years of service.

This has always been true but there has been a tendency to ignore this difference in officer and enlisted retirement.

Officers whose skills and backgrounds are especially required by the Navy, who are in receipt of orders, under a payback obligation, or in billets which require the completion of a normal tour of duty would probably find their application for retirement denied.

Generally speaking, officers who meet the criteria listed above will receive favorable consideration.

Grains of Salt —



Requests for voluntary retirement should be addressed to the Secretary of the Navy and forwarded via the chain of command and the Chief of Naval Personnel or the Commandant of the Marine Corps as applicable.

The instruction cautions against making the request contingent upon other personnel action. It also suggests that requests be submitted at least three months in advance of the desired date of retirement.

Enlisted men with teaching contracts may submit evidence of such contracts to their commanding officers instead of the items required under Para. 5b and 5c of BuPers Inst. 1910.12C.

That instruction and NavAct 4 contain complete details on early release for prospective students and teachers.

New Officer's Data Card Is Being Distributed

Last month the Bureau of Naval Personnel began distribution of a form which is of prime importance to an officer's career, namely, the Officer Preference and Personal Information Card (NavPers 2774) which was revised last May.

The new forms can be obtained through Navy forms publication and supply distribution points.

As almost everyone knows, processing and storing personnel data has been mechanized. This has increased the accuracy and timeliness of personnel records. However, as BuPers Inst. 1301.25B points out, accuracy begins with the officer whose duty it is to keep current the information on his own data card.

Information on an officer's data card, combined with performance records, qualification requirements and other information are used to determine an officer's future. Therefore, in his own interest, he should make a special effort to keep current such changing items as his dependency status and the curriculum preferences for postgraduate instruction.

New information on how to indicate preference for postgraduate study is included in the new instruction.

The BuPers instruction also contains detailed directions for preparing and submitting the revised Officer Preference and Personal Information Card and a sample copy of it.

Bureau Would Like Your Help With Its Enlistment Program

BUPERS. INST. 1133.3E, recently published, reemphasizes the Chief of Naval Personnel's concern with, and interest in, the Navy-wide reenlistment program.

The new instruction points out that the readiness of the Navy depends upon the retention of well-qualified men and women for career service. Men who entered the Navy just before and at the beginning of World War II are transferring to the Fleet Reserve in ever-increasing numbers. In addition, the experience level is being further depleted through the loss of many critical ratings who were involuntarily extended last year.

Reenlistments, says CNP, should be of paramount importance to every command in the Navy. And the importance of the Career Information Teams and the Career Counselor concept in this field can not be too heavily stressed.

Along this line, the new instruction is specific in stating that the administration of reenlistment programs must be in all cases a command function. However, it adds, BuPers desires and intends to provide all possible technical assistance.

Thus, Enclosure One to the instruction establishes basic requirements for the reenlistment program, while Enclosure Two lists some aids which can be of real assistance in maintaining an effective reenlistment program at your base. Both enclosures are reprinted below in their entirety.

Reenlistment Program Guide

- Career Counselors should be selected and trained as described in the *Career Counseling Guide* (NavPers 15878A). Formal training for Career Counselors can be obtained from the Career Information and Counseling Schools located at Norfolk and San Diego. A main goal is to train one Career Counselor for each shipboard division or the administrative equivalent. In most instances these men will conduct the division counseling on a collateral duty basis.

- The Career Information and Counseling Schools at Norfolk and San Diego convene every four weeks. The course length is three weeks. Training is provided for both Career Counselors and Career Information

Team members. (The counselor and team member courses run concurrently.) Upon completion of the course the Career Information Team member is assigned an NEC of 9589, while the Career Counselor is given an NEC of 9588. Quotas may be obtained from the Naval Schools Command, Norfolk, for East Coast activities, or from the Service School Command, San Diego, for West Coast ships and stations.

- Officers and senior petty officers must be fully informed of the importance of an effective reenlistment program (to the Navy and to their own command). Wide use of Career Information Teams is recommended. The success of the Reenlistment Program is directly related to the initiative and interest shown at the command level.

- Career Information and Counseling procedures as outlined below will be conducted by each command to ensure that all enlisted personnel are fully aware of the opportunities and benefits that are available in the naval service. The formal series of

counseling interviews are directed primarily to personnel in their first term of service. Although no formal report is required in the case of interviews held with career people, every effort must be made to make sure that they are informed. The following schedule of interviews will be conducted:

Reporting—This interview shall be conducted when a member first reports to a ship or station following completion of recruit training and/or Class "A" School. This transition point from recruit training to the operating Navy provides an excellent opportunity to counsel the man on command regulations and educational opportunities within the Navy. Section II, chapters three, four, five, seven and ten of the *Career Counseling Guide* provide guide lines for this and subsequent interviews.

First Progress—This interview will be conducted one year after the reporting interview, but it will not be held later than after one and a half years of service.

Second Progress—This interview

NOW HERE'S THIS

One for the Birds

The question — "Which came first, the chicken or the egg?" — has plagued man through the ages. Endless debate has raged, but the egg people have never retreated an inch from their position, while chicken fanciers have remained equally adamant.

Now, however, in the unlikely setting of the South China Sea, two ships think they've solved the problem — at least to their mutual satisfaction.

The question arose this time during the recently concluded SEATO maritime exercise *Sea Devil*, in which the navies of six SEATO member nations participated. Seems the captain of the destroyer *USS Lyman K. Swenson* (DD 729) discovered his ship had run fresh out of eggs. It was definitely no yolk as far as he was concerned.

In something less than a trice the CO of the nearby Royal Australian Navy frigate *HMAS Queenborough* heard of his counterpart's plight, and scrambled to the rescue with an offer to send over some eggs. Now *Swenson's* skipper wanted those eggs, all right, but he didn't want to accept charity, so in true Yankee trader spirit he suggested

a swap — frozen chicken for fresh eggs.

The two ships promptly came alongside one another, and highlined the respective goodies onto each other's decks while underway. Then they got back to the business at hand — the training exercise.

Oh, and which came across the highline first? The chicken.



will be conducted after three years of service.

Reenlistment Interview—This interview will be conducted approximately four to six months before expiration of active obligated service. Each man who is recommended for reenlistment must be interviewed. Chapters nine and ten, Section II, of the *Career Counseling Guide* provide information concerning follow-up interviews.

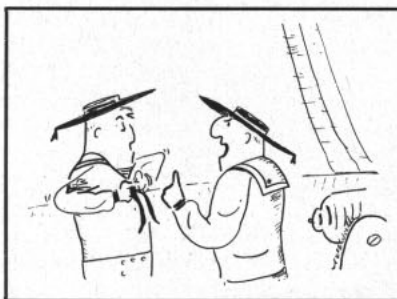
• A NavPers 736 (Rev. 1-62) *Report of Reenlistment Interview*, will be initiated for each man as he reports to a ship or station after recruit training and/or Class "A" School. At the completion of each scheduled interview, appropriate remarks will be entered. Upon transfer of personnel the NavPers 736 should be checked for completeness and forwarded with the service record to the new command. When the man is either reenlisted or separated the form must be completed and forwarded to the Chief of Naval Personnel (Pers-B2211), Navy Department, Washington 25, D. C.

Reenlistment Program Aids

Listed here are aids that should prove directly or indirectly useful in local reenlistment programs. A brief description of each item, together with a notation regarding its distribution, is included where applicable.

Career Orientation—Career Information Teams, usually consisting of an officer, a CPO and a PO1, are capable of making a very effective presentation on the advantages of a naval career. The presentations stress the necessity that all officers and leading POs continually emphasize the benefits and advantages of a Navy career. Individual commands and activities will benefit by making

All-Navy Cartoon Contest LTJG Horace G. Walker, USN



"And I say it's not fair . . . your section had liberty last year!"

use of these teams whenever opportunity affords.

Fleet and district commands are encouraged to submit changes to personnel allowances for authorization of Career Information Teams. However, owing to severe limitations of personnel ceilings, it will be necessary to offer compensatory reductions for any increase in personnel allocations. The utilization of teams on a full-time basis in small commands is not considered warranted, providing such commands may be supported by teams from type or district administrative commands.

Career Counseling and Reenlistment Interview Aids—*Career Counseling Guide* (NavPers 15878A) is a 52-page manual containing instructions for setting up effective interview programs. It explains the use of the *Report of Reenlistment Interview* forms (NavPers 736) and provides guidance for the Counselor. It is considered most suitable as a guide for conducting career counseling and reenlistment interviews required by *BuPers Manual*, Art. C-10103. Originally on all ships and stations distribution, it will be available at normal stocking points.

Career Counselor's kit, is a two-part counseling kit consisting of a presentation folder and collected reference materials, will be available through type commanders and district commandants. The kit has been designed to assist the counselor in conducting career counseling and reenlistment interviews.

Separation and Reenlistment Guide (NavPers 15877) (Rev. 3-62) is a pamphlet containing complete information on the correct procedures and the exact clerical steps to process enlisted personnel for reenlistment. This guide has been distributed to all ships and stations.

Career Information Posters featuring various aspects of a Navy career are distributed approximately every other month on an all ships and stations basis. Also, from time to time pamphlets such as *"Figuring Your Future"* and *"Facts for Figuring Your Future"* are distributed.

Instructions Pertinent to a Reenlistment Program—BuPers Inst. 1130.4 (current series); Subj: Enlistment in the Regular Navy of Naval Reserve personnel serving on active duty.

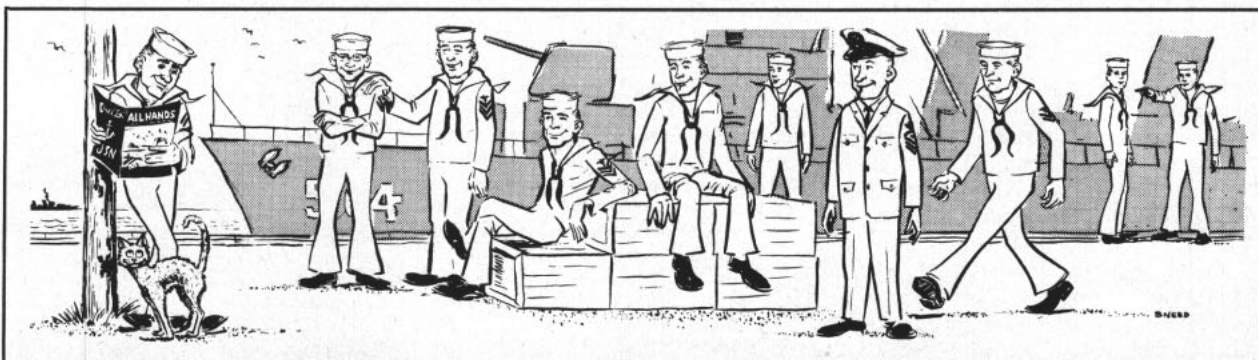
BuPers Inst. 1133.4 (current series); Subj: Discharge and reenlistment of Regular Navy enlisted personnel within one year of expiration of enlistment date.

BuPers Inst. 1133.11 (current series); Subj: Recommendations for Reenlistment.

BuPers Inst. 1133.13 (current series); Subj.: Selective Training and Retention (STAR) Program.

BuPers Inst. 1440.27 (current series); Subj: Selective Conversion and Retention (SCORE) Program.

Enlisted Transfer Manual, Chap. 12.8—Assignment to School as a Reenlistment Incentive.



ALL HANDS also can have NINE LIVES—if you pass this magazine on for nine other Navymen to read.

List of New and Re-Issued Motion Pictures Available To Ships and Overseas Bases

The latest list of 16-mm feature movies available from the Navy Motion Picture Service is published here for the convenience of ships and overseas bases.

Movies in color are designated by (C) and those in wide-screen processes by (WS). They are available for ships and bases overseas.

Stage Fright (1990): Comedy; Jane Wyman, Marlene Dietrich (Re-issue.)

The Iron Mistress (1991): Adventure Drama; Virginia Mayo, Alan Ladd (Re-issue).

Silver Whip (1992): Western; Dale Robertson, Rory Calhoun (Re-issue).

Mr. Belvedere Rings the Bell (1993): Comedy; Clifton Webb, Joanne Dru (Re-issue).

Model and Marriage Broker (1994): Jeanne Crain, Scott Brady (Re-issue).

Sweet Bird of Youth (1995) (C) (WS): Drama; Paul Newman, Geraldine Page.

Five Minutes to Live (1996): Melodrama; Johnny Cash, Donald Woods.

Merrill's Marauders (1997) (C) (WS): War Drama; Jeff Chandler, Ty Hardin.

Thirteen West Street (1998): Melodrama; Alan Ladd, Rod Steiger.

Belles on Their Toes (1999): Drama; Jeanne Crain, Jeffrey Hunter (Re-issue).

Young Man with a Horn (2000): Drama; Kirk Douglas, Doris Day (Re-issue).

The Daughter of Rosie O'Grady (2001): Musical Comedy; June Haver, Gordon MacRae (Re-issue):

Powder River (2002): Western; Rory Calhoun, Corinne Calvet (Re-issue).

The Guy Who Came Back (2003): Drama; Paul Douglas, Linda Darnell (Re-issue).

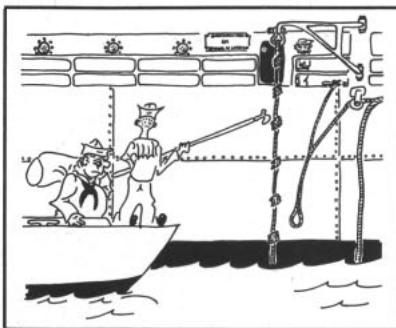
Wabash Avenue (2004): Musical; Betty Grable, Victor Mature (Re-issue).

Oh! You Beautiful Doll (2005): Musical; June Haver, Mark Stevens (Re-issue).

You're My Everything (2006): Musical; Dan Dailey, Anne Baxter (Re-issue).

Satan Never Sleeps (2007) (C)

All-Navy Cartoon Contest William E. Cass, SM2, USN



"Yeah, this captain sure is a bug on this physical fitness program."

(WS): Drama; William Holden, Clifton Webb.

Walk on the Wild Side (2008): Drama; Laurence Harvey, Jane Fonda.

Belle Sommers (2009): Melodrama; David Janssen, Polly Bergen.

Experiment in Terror (2010): Drama; Glenn Ford, Lee Remick.

Everybody Does It (2011): Comedy; Paul Douglas, Linda Darnell (Re-issue).

Way of a Gaucho (2012): Drama; Gene Tierney, Rory Calhoun (Re-issue).

My Pal Gus (2013): Drama; Richard Widmark, Joanne Dru (Re-issue).

When Willie Comes Marching Home (2014): Drama; Jane Frazee, Allan Jones (Re-issue).

Don't Bother to Knock (2015): Drama; Richard Widmark, Marilyn Monroe (Re-issue).

Let's Make It Real (2016): Comedy; Claudette Colbert, MacDonald Carey (Re-issue).

Elopement (2017): Comedy; Clifton Webb, Anne Francis (Re-issue).

Dangerous Crossing (2018): Drama; Michael Rennie, Jeanne Crain (Re-issue).

State Fair (2019) (C) (WS): Musical; Pat Boone, Ann Margaret.

Judgment at Nuremberg (2020): Drama; Spencer Tracy, Burt Lancaster.

Call Me Genius (2021) (C): Comedy; Tony Hancock, Dennis Price.

The Children's Hour (2022): Drama; Audrey Hepburn, Shirley MacLaine.

Up the Creek (2023): Comedy; Peter Sellers (Re-issue).

Track of the Cat (2024): Western; Robert Mitchum, Teresa Wright (Re-issue).

Captain Horatio Hornblower (2025); Gregory Peck, Virginia Mayo (Re-issue).

This Woman Is Dangerous (2026): Drama; Joan Crawford, Dennis Morgan (Re-issue).

Something for the Birds (2027): Comedy; Victor Mature, Patricia Neal (Re-issue).

You're in the Navy Now (2028): Comedy; Gary Cooper, Eddie Albert (Re-issue).

The House on Telegraph Hill (2029): Drama; William Lundigan, Valentina Cortesa (Re-issue).

Return of the Texan (2030): Western; Dale Robertson, Joanne Dru (Re-issue).

Something Wild (2031): Drama; Carroll Baker, Ralph Meeker.

Hands of a Stranger (2032): Melodrama; Paul Lukather, Joan Harvey.

Information Received (2033): Melodrama; Sabina Sesselman, William Sylvester.

Seven New Courses Offered To Officers and Enlisted Men

Six new enlisted correspondence courses and one new officer course have been issued by the Bureau of Naval Personnel, and nine enlisted courses and one officer course have been discontinued.

New Courses

Torpedoman's Mate 3 & 2 (NavPers 91297-B)

Communications Technician (M) 3 & 2 (NavPers 91557)

Journalist 3 & 2 (NavPers 91452-1)

Fire Control Technician 3 (NavPers 91339-1)

Aviation Boatswain's Mate (F) 3 & 2 (NavPers 91679)

Storekeeper 1 & C (NavPers 91433-2)

Nuclear Physics (NavPers 10901-B)

Discontinued Courses

Torpedoman's Mate 3, Vol. I (NavPers 91300-1A)

Torpedoman's Mate 3, Vol. II (NavPers 91296-A)

Torpedoman's Mate 2, Vol. I (NavPers 91302-1A)

Torpedoman's Mate 2, Vol. II (NavPers 91297-A)

Journalist 3 (NavPers 91451-C)

Journalist 2 (NavPers 91452-B)

Fire Control Technician 3 (NavPers 91339-B)

Storekeeper 1 (NavPers 91432-1B)

Storekeeper C (NavPers 91433-1A)

Basic Nuclear Physics (NavPers 10901-A)

Try Roughing It DeLuxe in the Tropical Panama Canal Zone

TROPICAL LIVING with practically all the stateside conveniences—that's what you can look forward to during a tour of duty in the Panama Canal Zone.

The Canal Zone is a tiny strip of land about in the middle of the Republic of Panama. It stretches from the Atlantic to the Pacific Ocean, a distance of about 50 miles, and is only 10 miles wide—five miles on either side of the canal. It runs almost north-south, since the Atlantic entrance of the canal is north and slightly west of the Pacific entrance. At the Atlantic entrance are the two cities of Cristobal, in the Canal Zone, and Colon, in the Republic of Panama. At the Pacific entrance are Balboa, in the Canal Zone, and Panama City, which is the capital of the Republic of Panama.

The Canal Zone is an area granted in perpetuity by the Republic of Panama to the United States for the construction, operation, maintenance and protection of the canal. By terms of the treaty between the United States and Panama, the United States has complete and exclusive sovereignty in the Canal Zone.

The population of the zone is composed mainly of personnel of the Panama Canal Company, the Canal Zone government, the Army, Navy and Air Force, and their families.

The climate is typically tropical, with high humidity and relatively high, but even, temperatures throughout the year. There are two seasons—dry from January to April and rainy from May to the end of December. The dry season is tempered with trade winds which blow almost constantly throughout the four-month period. Temperatures vary little throughout the year, the means ranging from 73 to 87 degrees on the Pacific side and from 73 to 85 degrees on the Atlantic side. Extreme temperatures on the Pacific side are 63 degrees in January or February and 97 degrees in April. The Atlantic extremes are 66 and 95 degrees, occurring in the same months as the Pacific extremes. The rainfall varies greatly between the two sides of the Isthmus. The average annual precipitation on the Atlantic side is 130 inches while on the Pacific side the annual rainfall is only 68 inches. On the whole, the climate is pleasant

All-Navy Cartoon Contest
LT Paul B. Kincade, USN



"Is this where they keep the stern sheets?"

with cool evenings throughout the year.

Entry into the Canal Zone—All naval personnel are required to have permission for their dependents to enter the Canal Zone (15th Naval District) whether entry is for establishing residence or to visit. Dependents should not begin to travel to the area until this permission has been granted. Upon receipt of orders to duty in the Canal Zone, Navy men who want their dependents to accompany them should submit a request to COM 15. Permission for entry of dependents will normally be approved if quarters are available.

Commercial transportation is available to and from the Canal Zone by major airlines, via Tocumen airport in the Republic of Panama.

Housing—Naval housing in the Canal Zone is adequate.

Since well-ventilated houses are essential for comfortable living in the tropics, most quarters somewhat resemble "summer type" dwellings in the United States. All open areas are screened, but most are without window glass. Although this type of construction is well-suited to this locality, the new arrival will find that his privacy has been somewhat reduced.

Household Effects—Most government quarters are adequately furnished with the prescribed allowance of furniture, including stoves and refrigerators. Since many types of wood

deteriorate in the tropics, and free circulation of air is essential to proper heat control, specially designed furniture is used to meet these two problems.

It is not advisable to ship to the Canal Zone such items as overstuffed chairs, studio couches or large, expensive musical instruments. Books are prey to mildew, and since good libraries are available, only those books felt necessary should be brought. You can make good use of throw rugs for bedrooms or a small cocktail rug for the living room if you have them, and your own pet pictures and wall decorations will make your quarters look like home.

But remember that mildew and termites are problems in the tropics, before you decide to bring any expensive items—including good pictures and hangings. (Extra lamps may come in handy, but are not necessary.)

Excellent silverware, chinaware and table linens are available in Panama and the Canal Zone at prices lower than those in the United States, in case you don't have your own. A kit consisting of the bare essentials of bed linens, towels, dishes, silverware and cooking utensils will be placed in your quarters by your sponsor (see below). The kit may be retained by you until your household effects arrive.

Sponsors—There is a sponsorship program in effect throughout the 15th Naval District. Under the program, your sponsor is assigned by your new commanding officer and will write you, giving any information you may need. Your sponsor will also ready your quarters for your occupancy, including the purchase of immediate food needs, and meet you upon arrival in the Canal Zone.

Hotel Accommodations—There are two modern hotels in Panama City. One is the luxurious El Panama Hilton, on the outskirts of the city proper, where studio-style bedrooms with private terraces are available. Public rooms are air-conditioned. An outdoor patio, swimming pool and cabana club, roof garden and dining room are features of the El Panama Hilton. The International Hotel, in the heart of the city, may be classed as good.

At the El Panama Hilton rates

range from \$10.00 to \$14.00 per day, single occupancy; \$15.00 to \$17.00 per day, double occupancy. At the International rates average \$6.00 to \$7.00 per day, single occupancy; \$8.00 to \$10.00 per day, double occupancy.

The Tivoli Guest House is a comfortable hotel in the Canal Zone at Ancon, just across the street from Panama City. The Tivoli is open to employees of the U.S. government, including service personnel and their guests. Here the rates are \$4.50 to \$5.00 a day for a single room with bath, and \$6.50 to \$7.50 for a double room with bath.

For the most part, hotels are run on the European plan. Some grant a discount to military personnel. The tourist season extends from December through March, and hotel accommodations are usually difficult to obtain during these months.

Automobiles—An automobile is almost a necessity, since public transportation is inadequate. The climate is hard on cars, so it is best not to buy a new car to bring to the Isthmus. Instead, be sure the car you have is in good operating condition (and undercoated) before you leave the United States. Tires, batteries and accessories can be bought reasonably at Panama Canal commissaries and also at Army, Navy and Air Force Exchange garages. Mechanical repairs are slow and expensive. Gasoline costs about 20 cents per gallon in the Canal Zone. It is best to start making arrangements with the Naval Supply Depot, Bayonne, N. J., for transportation of your car as soon as practicable. You may be able to have your car aboard the same transport in which you and your dependents will travel. Canal Zone license plates cost \$5.00 per year with half-rates available after 1 July.

A Canal Zone driver's license is required in the Zone, and you'll need one from the Republic of Panama for driving in or through the Republic. In most cases, where a driver has a permit from the state of his last residence, only a written examination is required for the Canal Zone license. The Republic of Panama permit is issued contingent upon this test.

It is advisable, before leaving the States, to make certain your automobile insurance will cover you while driving in the Republic of Panama. If your present policy does not cover

you, your company may write an additional clause into the policy. This coverage is necessary when applying for a military base car identification sticker.

Clothing—Clothes suitable for mid-summer in the United States are right for Panama. In general, dress is informal, but women may wear gloves, hats and stockings to luncheons and teas. Washable clothing is the most practical for everyday wear, since dry cleaning is rather costly and not always of the best quality. Women leading active social lives (senior officers' wives in particular) will need cocktail dresses and evening gowns. Woolens and furs should be left in

the States, except for a few things in case one has the opportunity to visit neighboring high-altitude places. The humidity encourages mildew, especially on woolens, silks and leathers, which should be kept in specially heated closets in the quarters.

The Canal Zone commissaries and the service Exchanges have clothing for the family at reasonable cost. Wider selections are available in the cities of Panama and Colon, but at higher prices than in the States. If your feet are hard to fit, it is wise to bring a supply of shoes with you.

For men, suits of tropical worsted, Palm Beach, linen, seersucker and especially the new wash-and-wear

HOW DID IT START

Homeward Bound Pennant

When it's time for a U. S. Navy ship to return home after nine months or more in foreign waters, a member of the crew (in the absence of a seagoing Betsy Ross) usually gets the job of making a homeward-bound pennant.

The pennant is divided vertically into two parts. The portion next to the hoist is blue, and the fly is divided horizontally into halves—the upper red and the lower white.

The use of such a pennant has grown over the years, and no one seems to know exactly when it started.

The formula for determining the length of the pennant has changed from time to time. Back in 1945, for example, an *All Hands* feature said: "Today it generally provides one foot of length in the pennant for each man who has been in the ship a year on foreign duty, plus one inch for each man per month over a year. This is why the sub tender, *Orion* (AS 18), trailed a pennant 400 feet long when she steamed into New York on Navy Day 1945."

At times, we are told, the length of the homeward-bound pennant was so great that it required an inflated hog's bladder to keep the trailing end aloft.

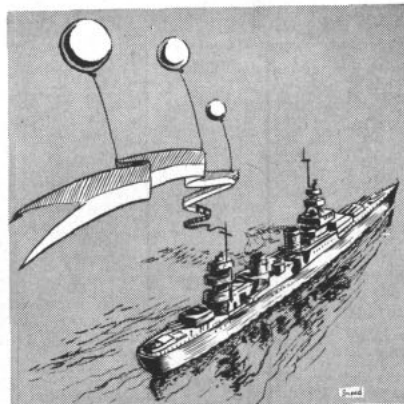
A homeward-bound pennant today is made to specifications set down in *U. S. Naval Flags and Pennants—Descriptions, Uses and Customs* (DNC 27). The color is the same as before. In the blue field is placed one white star for the first nine months that the ship has been continuously on duty outside the United States, plus one additional white star for each additional six months.

The length of the pennant is normally figured on a basis of one foot for each officer and enlisted man on the ship who

has been on duty outside the United States in excess of nine months. Where this produces a pennant excessively long, its length is generally kept within practical limits. In any case, the length cannot exceed the length of the ship.

The pennant may be flown when the ship gets underway for the United States and can be displayed until sunset on the day of arrival in a U. S. port of destination. When the ship arrives in the United States, the pennant is divided among the ship's crew. The blue portion, which contains the stars, is presented to the commanding officer and the remainder of the pennant is divided equally among the ship's company.

The longest homeward-bound pennant we've heard of was flown from *USS Augusta* (CA 31) when she returned home in 1940 after seven years in foreign waters. She flew a homeward-bound pennant that measured 700 feet. We don't know whether or not it had an inflated hog's bladder holding it up.



fabrics are popular for off-duty hours. School children generally dress about like this:

- Grade School Girls—Cotton dresses (short sleeves or no sleeves).
- Grade School Boys—Jeans and open-collar shirts and T-shirts. Some boys do wear shorts.
- High School Students—Clothing as in the United States. Skirts and blouses for the girls—jeans for the boys.

The uniform of the day for officers and chief petty officers is tropical white or tropical white, long. One uniform of service dress blue, one of service dress khaki and all of your whites should be brought along. In addition, you should bring any working khaki you may have, along with all items of the tropical working uniform that are in your possession. All the items of working uniforms are available locally. Officers occasionally need the dinner dress white uniform, which may be purchased locally in case you do not have one.

The uniform of the day for white-hats is whites without jumpers, or white or khaki shorts. Slacks, shorts and sports shirts are worn more than any other items of civilian clothing.

Calls—The newly arrived officer (and his wife) reporting to the staff of Commandant, 15th Naval District, should call on the commandant, chief of staff and the head of his staff section within a few days after his arrival. Arrangements for the call on the commandant should be made in advance through his aide. These calls are considered obligatory. Other officers of the staff are encouraged to exchange calls.

Food—Panama Canal Company commissaries, located in the various Canal Zone communities, are comparable to department stores and are operated under government control. Supplies of all kinds for personal and home use may be bought. These commissaries carry the usual food-stuffs, including cold storage products, meats, fruits, vegetables, cheese, butter, eggs and quick-frozen items. Food is plentiful, but lacking in variety—particularly in fresh vegetables and fruits. Pasteurized milk is available. Canned foods are plentiful, including baby foods.

In addition to food, Panama Canal Company commissaries stock clothing for men, women and children; hardware and household furnishings. The

All-Navy Cartoon Contest James E. Weaver, Jr., DK3, USN



"Captain, Higgins just completed his 300-yard dash."

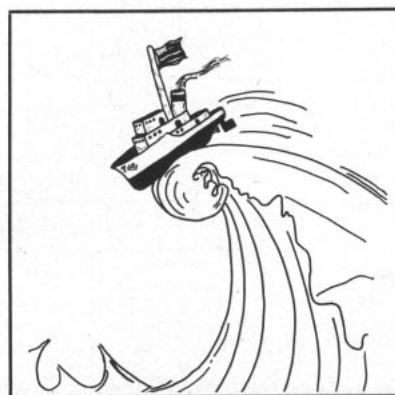
commissaries and Exchanges also offer an excellent opportunity to purchase Irish linens and English china of well-known makes in limited supply. Special orders may be placed at the Exchanges.

The commissaries have family laundry and dry cleaning services.

Army, Navy and Air Force commissaries and Exchanges at the various installations offer services similar to those of the Panama Canal Company commissaries and have lunch and fountain service. They carry an interesting stock of goods from Central and South America and foreign countries elsewhere. Navy Exchanges operate a laundry and pick-up and delivery service.

Domestic Help—Household servants are available at wages averaging from \$20.00 to \$50.00 per month. They may also be engaged on a daily basis for approximately \$2.00 to \$2.50 per day. There is a maid agency service available at the Army post of Fort Clayton and a maid agency in Panama City. Otherwise, maids may be

All-Navy Cartoon Contest Earl A. Hall, DMSN, USN



"All engine back full!"

employed through newspaper advertisements and recommendations from residents. The supply is plentiful, although many are unskilled. Most servants speak English or Spanish. Jamaican or Panamanian seamstresses can be located, some of whom will come to your home to do sewing if you have a machine. Laundresses are available at reasonable rates.

Medical Facilities—Dependent medical requirements are provided for by the Panama Canal Company. For those stationed at Atlantic-side activities, the Coco Solo Hospital is available. Services on the Pacific side of the Isthmus are available at Gorgas Hospital.

Limited dental service for dependents is available. Treatment will normally consist of those procedures necessary for the maintenance of an already healthy mouth. It is therefore suggested that you have all necessary dental work done on your dependents' teeth before their (the dependents' not the teeth's) departure from the United States.

As a result of the constant vigilance of United States health authorities, the Canal Zone is singularly free from disease, and health conditions are excellent. The water in both Panama and the Canal Zone is pure.

Education—The Canal Zone school system compares favorably with modern school systems in most cities of the United States. Excellent educational facilities are provided from kindergarten through junior college. Graduates of the two high schools have college entrance qualifications. The curriculum of the junior college is comparable to those of junior colleges in the United States. Tuition in the Canal Zone is free to dependent children of United States military personnel from kindergarten through the 12th grade. The school term commences the first week in September and ends the first week in June.

A fee of about \$200.00 is required for junior college students. The school term commences the first week in September and ends the first week in June. Special-help schooling is available in Canal Zone schools. School bus service is provided from the quarters area to all Canal Zone schools.

Night extension courses at the junior college at Balboa and at some Army posts are available. Courses

include a variety of subjects. Excellent opportunities exist for study of the Spanish language. The YMCA and JWB also offer interesting courses in a variety of subjects.

Religion—Facilities for religious activities are plentiful. Service personnel and dependents may attend services at Army, Navy and Air Force installations, or at churches of the various denominations in the Canal Zone or Republic of Panama.

Money and Banking—The Panamanian unit of currency is the silver balboa, equivalent in value to the United States dollar. United States and Panamanian silver is interchangeable and is used in either the Canal Zone or the Republic of Panama. Since Panama prints no paper money, the dollar is legal tender throughout the Isthmus. There are no currency regulations, and the United States dollar may be imported and exported freely.

The Chase-Manhattan Bank and National City Bank of New York have branches in Balboa and Cristobal which handle all normal banking business. For cashing checks, drafts and the like payable in the United States, a charge of one-fourth of one per cent is made up to \$500.00, with a minimum charge of 15 cents. For checks over \$500.00 an exchange charge of one-eighth of one per cent is made, with a minimum charge of \$1.25. Checks on Canal Zone banks are charged a similar exchange fee when cashed in the States. In order to avoid these charges some families prefer to keep a current checking account in a United States bank. The aforementioned banks do not credit interest on savings accounts.

Recreation—Swimming, golf, tennis and fishing are year-round sports, with the Bay of Panama providing some of the best game fishing in the world. Baseball, softball, bowling, track and range shooting are popular, as are riding and hunting. There is a full program of youth activities—Boy and Girl Scouts, Little League baseball and so forth.

Trips to neighboring regions can be taken by car, plane or boat. You can travel at small cost, and with little effort, to the ruins of the old Spanish fort at San Lorenzo by the mouth of the Chagres River; to the San Blas Islands inhabited by the friendly Cuna Indians; to Taboga Island; and to the interior.

Officers' clubs are located at most Army, Navy and Air Force installations, and clubs for enlisted personnel and their families are available at the large naval activities. Motion picture theaters are conveniently located at service installations, as well as in all Canal Zone townsites.

Good beauty shops are available. Commissaries and Exchanges carry cosmetics, but it is best to bring along a supply of your favorite brand, as there is only a small variety carried in the Canal Zone. A wider selection is available in Panama City.

Pets—Every dog or cat brought into the Canal Zone is held in quarantine four months. During the stay in quarantine the pet will be kept at the kennels in Corozal, Canal Zone, about 15 minutes' driving time from Headquarters, 15th Naval District, at a cost of fifty cents per day. Your pet should be inoculated for rabies before departure, and it will be necessary for you to obtain a statement from a veterinarian that your pets are healthy and free from disease before the pet will be taken aboard the transport. Pet cages are provided on all MSTs vessels at a nominal fee. Transportation of pets aboard MATS aircraft is prohibited.

Birth Documents—Naval dependents should have in their possession a birth certificate (or affidavit in lieu thereof when birth records are non-existent) or some other documentary proof of citizenship. Such documents must be presented if application is made at a United States Embassy or Consulate for passports to visit Central or South American countries other than the Republic of Panama.

Passports—As stated above, passports are required for entering Central and South American countries other than the Republic of Panama, but they are not required for naval personnel or their dependents for entry into the Canal Zone or Panama.

Communications—Unlimited postal and cable facilities are available. Air mail to the United States takes about two days, and ordinary mail eight to 10 days. Cable, radio and telephone service is available at moderate rates, and service is comparable to that in the United States.

United States postage stamps cannot be used in the Canal Zone. Canal Zone stamps must be purchased for all outgoing mail. Postage rates are the same as in the United States.

HERE'S YOUR NAVY

Scientists at the Naval Ordnance Laboratory, White Oaks, Md., have developed an improved method for observing the way explosives act when they are heated to temperatures of 300 to 1000 degrees centigrade. If you're thinking of the thermometer home on the back porch, think in terms of 572 to 1832 degrees Fahrenheit.

Up to now, explosives have gone to pieces so fast at these temperatures that scientists have been more



or less in the dark as to what actually happens, although they have a pretty well developed theory that an explosive's decomposition rate at high temperatures is the most important factor in determining explosive sensitivity.

The ideal situation for making such a test would be to place the explosive at a low temperature in an endless cylinder, then heat it to a specific high temperature until it explodes.

NOL's new experimental technique employs a tube made of the same thin stainless steel used in a hypodermic syringe.

The advantage of using this type of tubing is that it can be electri-



cally heated to high temperatures almost instantly.

Since the ends of the tube are sealed, the explosive is prevented from escaping in vapor form before explosion takes place.

The point of all this is, of course, to learn more about the behavior of explosives so they can be designed to explode in a weapons system when desired, yet remain insensitive enough to withstand other than ideal conditions during shipment, storage and handling.

Letter of Appointment to Collateral Assignment Is Required in Certain Cases

If you're an officer who performs some collateral duty, such as Mess Treasurer or Classified Material Control Officer, you are not, under existing Navy-wide directives, required to have a formal letter of appointment. Whether or not you are appointed to your collateral duty by formal letter depends on the job and the policy of your command.

But, if your CO does not appoint you formally, it will do no harm to ask for a letter, and having one may save you from some confusing moments.

An example of the confusion that comes up from time to time was brought to the attention of ALL HANDS recently by the officers of a command who didn't have formal letters of appointment to their collateral duties. Each time they had an administrative inspection, they were asked to produce formal letters of appointment—noting that the standard wording in the inspector's check-off list was "Is the officer appointed in writing?"

At the command concerned, a notice was published each month which set forth the boards, committees, or collateral duties to which the various officers were assigned. The notice charged each officer with the responsibility of performing the duty in accordance with existing directives.

As far as the officers were concerned, this procedure was sufficient for getting the word to whoever was responsible for what. Furthermore, they argued, the over-all Navy policy on individual letters of appointment is vague.

For example, the *Manual for Commissioned Officers Messes Ashore* notes that commanding officers shall appoint an officer as Mess Treasurer, but doesn't spell out how he should be appointed. By word of mouth? By a notice on a bulletin board? By formal letter?

Nevertheless, the check-off list used during inspection of the Mess called for a letter of appointment, which, as far as the Mess Officer was concerned, pretty well indicated his appointment should have been made in writing—by formal letter.

Other officers agreed that the

All-Navy Cartoon Contest
LTJG Thomas K. Dean, USNR



"I'd like to speak to someone in charge."

notice published each month was sufficient "written" appointment to collateral duties.

You may or may not have a similar problem at your command. If you do, here's the word:

Although formal letters of appointment to collateral duties are not spelled out in Navy-wide directives, a letter is customary when the job is one in which accountable material is a responsibility. Otherwise, for any specific collateral duty, the basic directive which establishes the function should note whether or not a formal letter is required.

If the basic directive does not make the appointment procedure clear, you should follow the procedure contained in your type or administrative commander's instructions, customary administrative practices, or inspector check lists.

In other words, if your administrative inspector has "formal appointment" on his check-off list, this should be considered the official word that your appointment should have been made by formal letter.

Normal Tour of Recruiting Duty Set at Three Years

To make better use of experience, a new paragraph authorizing longer shore duty for BuPers-controlled male recruiters has been added to Chapter IV of the *Enlisted Transfer Manual* (NavPers 15909A) in the form of subparagraph 4.41g.

The new word affects personnel on recruiting duty whose shore tours expire during or after January 1963. It provides for a normal tour of recruit-

ing duty of three years or the shore tour length established for the recruiter's particular rate or rating if that is longer.

Tours for BuPers-controlled male recruiters who are attached to overseas commands will conform to currently established tour lengths for the areas to which they are attached.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, NavActs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; NavActs apply to all Navy commands; BuPers Instructions and Notices apply to all ships and stations. This report covers a two-month period.

Alnavs

No. 8—Reminded all officers of a change in submission dates for fitness reports.

No. 9—Rescinded immediately the restrictions on travel of DOD-sponsored dependents to Western Europe imposed by Alnav 38/61 and Marine Corps Order 1300.8D.

No. 10—Ordered changes in procedures for authentication of military officials during courts-martial.

No. 11—Invited attention to major changes in the nominating and screening process of selecting candidates for assignment to the Naval Preparatory School to compete for an appointment to the Naval Academy.

No. 12—Directed that a drastic reduction in the use of first class commercial air transportation become effective immediately.

No. 13—Announced approval by the Secretary of the Navy of the report of a selection board which recommended promotion of certain warrant officers and commissioned warrant officers.

No. 14—Referred to the duty free entry of personal and household effects after 1 July.

No. 15—Announced establishment by the Secretary of Defense of the

Armed Forces Expeditionary Medal. Medals will not be available for approximately six months.

No. 16—Discussed changes in entitlement to BAQ for enlisted personnel while in confinement under jurisdiction of foreign civil authorities.

Instructions

No. 1133.3E—Reemphasizes the need for the enlistment of qualified enlisted personnel and outlines an effective reenlistment program for use by commanding officers.

No. 1301.25B—Sets forth instructions regarding submission of the revised Officer Preference and Personal Information Card (NavPers 2774, Rev. 5-62).

No. 1430.12D—Provides instructions for the administration of the Proficiency Pay program.

No. 1611.12—Introduces the revised Report on the Fitness of Officers (NavPers 310, Rev. 4-62), and provides instructions governing its preparation and submission.

No. 1730.7—Reiterates and supplements the efforts to build a strong moral, ethical and spiritual foundation in the Navy.

No. 5390.2A—Consolidates into one directive general information pertaining to naval leadership.

Notices

No. 1440 (3 April)—Announced the disestablishment of the Oceanographer (SOO) service rating, and advance information concerning the Aviation Antisubmarine Warfare Technician (AX) general rating.

No. 1430 (4 April)—Announced the names of those who may be ad-

vanced in rating to chief petty officer, acting appointment.

No. 1531 (25 April)—Provided authority to nominate enlisted USN and USNR personnel on active duty to participate in the Navy-wide examination for assignment to the Naval Preparatory School as candidates for appointment to the Naval Academy.

No. 1700 (30 April)—Announced information and rules governing the 1962 All-Navy photography contest and the 10th Interservice photography contest.

No. 1306 (8 May)—Provided advance promulgation of a change to the *Enlisted Transfer Manual* (NavPers 15909A) concerning the rotation tour dates of recruiting personnel.

No. 1000 (21 May)—Established procedures for reporting and verifying data on citizenship status of members of the naval service.

No. 1418 (25 May)—Announced the schedule for Navy-wide examinations for enlisted personnel to be held in July and August, and called attention to pertinent information regarding advancement in rating.

No. 1740 (7 June)—Cautioned naval personnel of the nondelivery by certain money-changing firms of money deposited for exchange to pesos for transmittal to the Philippines.

No. 1414 (21 June)—Provided information concerning plans for future changes to the *Manual of Qualifications for Advancement in Rating* (NavPers 18068).

No. 5802 (22 June)—Provided information concerning naturalization of aliens and the right to immediate naturalization of alien wives and alien adopted children of naval personnel assigned to duty abroad.

Role of Commanding Officer in Leadership Is Stressed

Leadership and high moral standards are being continually stressed throughout the Navy. Recently the Chief of Naval Personnel, in BuPers Inst. 1730.7, again emphasized that the protection of these standards is and must remain the responsibility of the commanding officer. He identified these particular responsibilities that rest with the CO:

- Encourage the men in development of moral, spiritual and religious

values consistent with their religious beliefs.

- Take a personal interest in the off-duty activities of personnel and make sure a well-rounded program of religious, educational, and recreational activities is available to them.

- Insure that the type of entertainment presented and the contents of publications sold or circulated aboard the ship or station conform to established moral standards.

Commanding officers have been directed to develop to the highest degree the conditions and influences that will promote the health, morals, and spiritual values of their personnel. The character education session is one of the most useful methods, conducted both afloat and ashore throughout the Navy.

In BuPers Class A schools, the number of periods set aside for character education is dependent upon the length of the course. This ranges from seven periods for a course which runs 10 weeks or less to 14 periods for a course which runs 20 weeks or more.

Material for character education discussions is found in several publications. Each is slanted for a specific audience: for personnel afloat, *Because of You* (NavPers 15874); for personnel in the Far East, *My Life in the Far East* (NavPers 15881); for personnel in service schools, *Our Moral and Spiritual Growth—Here and Now* (NavPers 91962); for personnel in the continental United States, *This is my Life* (NavPers 15884); for male recruits, *For Men Only*; and for Wave recruits, *Getting to Know You*.

Full information may be found in BuPers Inst. 1730.7.

All-Navy Cartoon Contest
Ronald E. Atchison, DM2, USN

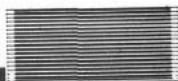


"I'd say you have about 24 seconds ...
23 ... 22 ... 21 ... 20 ..."

All-Navy Cartoon Contest
James J. McAndrews, Jr., DMSN, USN



DECORATIONS & CITATIONS



LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service to the Government of the United States..."

★ BAYLIS, John R., CDR, USN, for the performance of outstanding services from October 1957 to June 1959 as Assistant Design Superintendent, Portsmouth Naval Shipyard. During this period, CDR Baylis made important contributions in the field of submarine design and development, particularly in the development of specifications. His contributions have resulted in significant improvements in submarine capabilities. His leadership, professional skill, and devotion to duty were in keeping with the highest traditions of the U.S. naval service.

★ BLAIR, Leon B., LCDR, USN, for services from 2 Feb 1957 to 8 Aug 1960 on the staff of Commander, U.S. Naval Activities, Port Lyautey, Kenitra, Morocco. LCDR Blair distinguished himself by his notable achievements in the field of international and community relations, attaining objectives which have materially enhanced the prestige of the United States. Among his many accomplishments, he gained outstanding recognition for the U.S. forces involved in the massive relief job which he organized and coordinated during the Rharb Valley floods of 1958 and 1960; rendered invaluable assistance following the Agadir earthquake disaster of 1960 by organizing, coordinating, and aiding rescue teams, and acting as liaison officer between the King of Morocco and the American Embassy.

Gold Star in lieu of Fourth Award

★ ESPE, Carl F., RADM, USN, for service from May 1958 to April 1962 as Commandant, First Naval District; Commander, U. S. Naval Base, Boston, Mass.; and Commander, U. S. Naval Base, Portsmouth, N. H. RADM Espe effectively coordinated the efforts of the several naval commands in the First Naval District, materially strengthening and making more responsive their support to the Navy. A dynamic and forceful leader, he expertly welded the various elements of his command into a highly integrated, cohesive unit to assure a maximum return in effectiveness and readiness of assigned forces. He

succeeded in solving a host of complex problems involving a combination of military and civilian policies, thereby enhancing the prestige of the Navy.

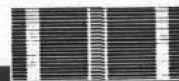
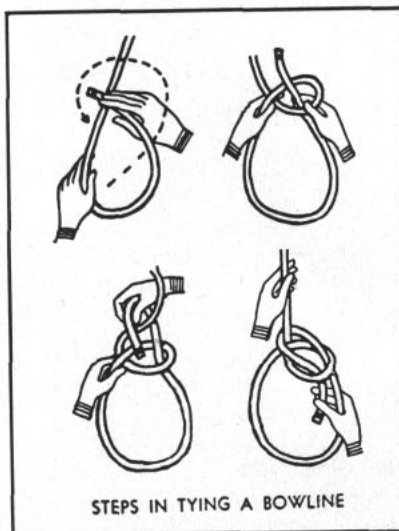
Gold Star in lieu of Fourth Award

★ McMANES, Kenmore M., RADM, USN, for service as Commandant, Sixth Naval District, and Commander, U. S. Naval Base, Charleston, S. C., from September 1959 to May 1962. RADM McManes solved a number of varied and complex problems in a constantly expanding and increasingly important command. Through his forceful leadership, sound judgment, and skilled diplomacy, he ensured harmonious relations between staffs.

Gold Star in lieu of Second Award

★ ROBBINS, Thomas H., RADM, USN, for the performance of outstanding service from August 1960 to May 1962 as Commandant, Potomac River Naval Command. An inspiring, dedicated and resolute leader, RADM Robbins executed his responsibilities with marked professional skill and diplomacy throughout this period. Through his ability to work in both military and civilian spheres in a complex command at the seat of government, he rendered valuable service in promoting harmonious relations for the Navy. In meeting and solving the challenging problems created within his command, he displayed a high degree of technical competence, leadership, and sound judgment.

Grains of Salt —



DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight..."

★ CRAFTON, Robert W., LT, USN, for extraordinary achievement in aerial flight on 5 Feb 1962. As pilot of a Navy ASW helicopter, the HSS-2 Sea King, LT Crafton succeeded in establishing a world's speed record for helicopters—210.65 miles per hour over a 19-kilometer course. Through his exceptional achievement, he clearly demonstrated the inherent capabilities and the maximum performance of a most important aircraft of the U.S. Navy. In addition, he was instrumental in focusing world attention on the continued significant development of the science of aviation in the United States.



NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy..."

★ CURRAN, Richard P., YN2, USN; MAXEY, Ray W., RD1, USN; and STROUD, Galen P., RD2, USN; for heroic conduct on the night of 17 Jun 1961 while serving on board USS *Chowanoc* (ATF 100) in waters southwest of Sasebo, Kyushu Island, Japan. Volunteering to enter the wardroom of *Chowanoc* to attempt to subdue an apparently deranged member of the crew who, armed with two pistols, was holding three of the ship's officers prisoner, the three men braved a hail of bullets to seize and overwhelm the crazed man.

★ SIGURDSSON, Daryl J., SN, USNR, for heroic conduct on the afternoon of 5 Dec 1961 while serving on board USS *Morton* (DD 948) at sea approximately 100 miles west northwest of San Diego, Calif. Hearing the cries of a shipmate trapped in a compartment filled with dense, toxic smoke during a shipboard fire, Sigurdsson unhesitatingly entered the compartment, groped his way through the blinding smoke, and succeeded in locating and in leading to safety the stricken shipmate. By his prompt, courageous, and decisive action in an emergency, Sigurdsson was directly responsible for saving a life.

ALL HANDS

BOOKS

FROM PRETTY PICTURES TO GRIM DEATH THIS MONTH

TWO KINDRED BOOKS form a likable introduction to this month's selections. Either will help orient you to today's Navy and events.

Tall Frigates, by Frank Donovan, tells of the first vessels of the United States Navy, which defended the interests of the new nation on waters around the world. Men-of-war like *Constitution*, *Constellation* and *Essex* successfully challenged the great sea powers such as the French, the English and the North African corsairs in bloody or brilliant duels. Donovan tells not only of the ships, but of their crews, the life aboard them, and the manner in which they were handled, from their launching to the final battle at Hampton Roads when *Monitor* doomed them a hundred years ago.

Somewhat broader in scope, **American Sail**, by Alexander Laing, describes and pictures the story of the American sailing ships and men of the sea from colonial times to the last years of naval and merchant sail. Sea fights, piracy, clipper ships, whaling, shipwrecks and rescues, far voyages, regattas, disasters and triumphs—all are shown, in more than 500 illustrations, as they appeared to contemporaries.

The Serpent's Coil, by Farley Mowat, describes another aspect of the sea. He tells of the sequence of events that took place on the North Atlantic in the late summer of 1948 in which the men and ships concerned meet not once, but three times, what Mowat chooses to call the "serpent's coil." He tells the origin of the first hurricane and traces its course until its fatal meeting with *Leicester*. The final success of her struggle against the sea owed everything to the Newfoundland men who manned the tugs sent to salvage this derelict. A true story, but it reads like good fiction.

Wait long enough and everything will happen at sea. For seven years, Portugal's *Santa Maria* was queen of the passenger line on the Atlantic. Then, without warning, on her 71st voyage, she became the scene of revolution. In **The Floating Revolution**, Warren Rogers, Jr., tells what happened and why. The *Santa Maria*, as you may recall, was the ship chosen by a small band of Portuguese revolutionists as a means of

denouncing their government. They weren't pirates, they insisted; they were revolutionaries. Rogers describes how the passengers took all this; the work of the U.S. Navy in tracking the ship down, shepherding her into Brazilian waters; the attempts at mutiny; the final outcome. This couldn't be put in fictional form because no one would believe it.

Two selections provide an interesting, if not ironic, comparison of a similar event. **Through the Valley of the Kwai** was written by a prisoner of war of the Japanese; **The Yoshida Memoirs** presents the efforts of an eminent Japanese statesman to re-establish his country after its defeat. As might be expected, the viewpoints are somewhat different.

Ernest Gordon in his *Valley of the Kwai* saw most of the war from the bottom up. He relates murder of prisoners by shooting or decapitation, by starvation, torture, and neglect of the sick and wounded. However, his is a story of hope—hope through the strength of personality of one person. Sick with dysentery, malaria and diphtheria, he was saved through the care and friendship of his fellows. His example gave hope to others. Despair gave way to hope; service to others lifted the spirits of the prisoners to a remarkable, and lifesaving, level. As a result of his experiences, Gordon entered the ministry after the war.

All-Navy Cartoon Contest
LT Paul B. Kincade, USN



"In the future, Scoggins, when I see fit to approve your leave request, a simple 'thank you' will suffice."

Shigeru Yoshida writes his *Memoirs* on an entirely different plane, of course, than that of Gordon. As foreign minister in Japan's first postwar cabinet and prime minister for several years, his memoirs are an account of the years of upheaval for his nation from the end of the war until the ratification of the San Francisco Peace Treaty in 1952. Yoshida gives an assessment of the achievements of the Occupation, a picture of relations between Japan and the United States and a hard-headed commentary on political affairs in postwar Japan.

Want to try something off-beat? If so, you might sample **Russian Through Reading**, by Kenneth Brooke and James Forsyth. You may find it entertaining and, if you're willing to expend a little effort, instructive. If you have any desire to learn Russian, this is for you. It assumes neither a knowledge of any other foreign language nor of formal grammar, and offers continuous Russian prose from the first lesson. Grammar is introduced as it occurs naturally in the text. You teach yourself by picking up the clues found in the text when the translation is given. An intelligent approach to the introduction of a new language. We could only wish the authors would do as much for English.

After reading the volumes suggested above, you are most certainly entitled to a bit of recreation. You can't go wrong with either of the fiction titles selected this month.

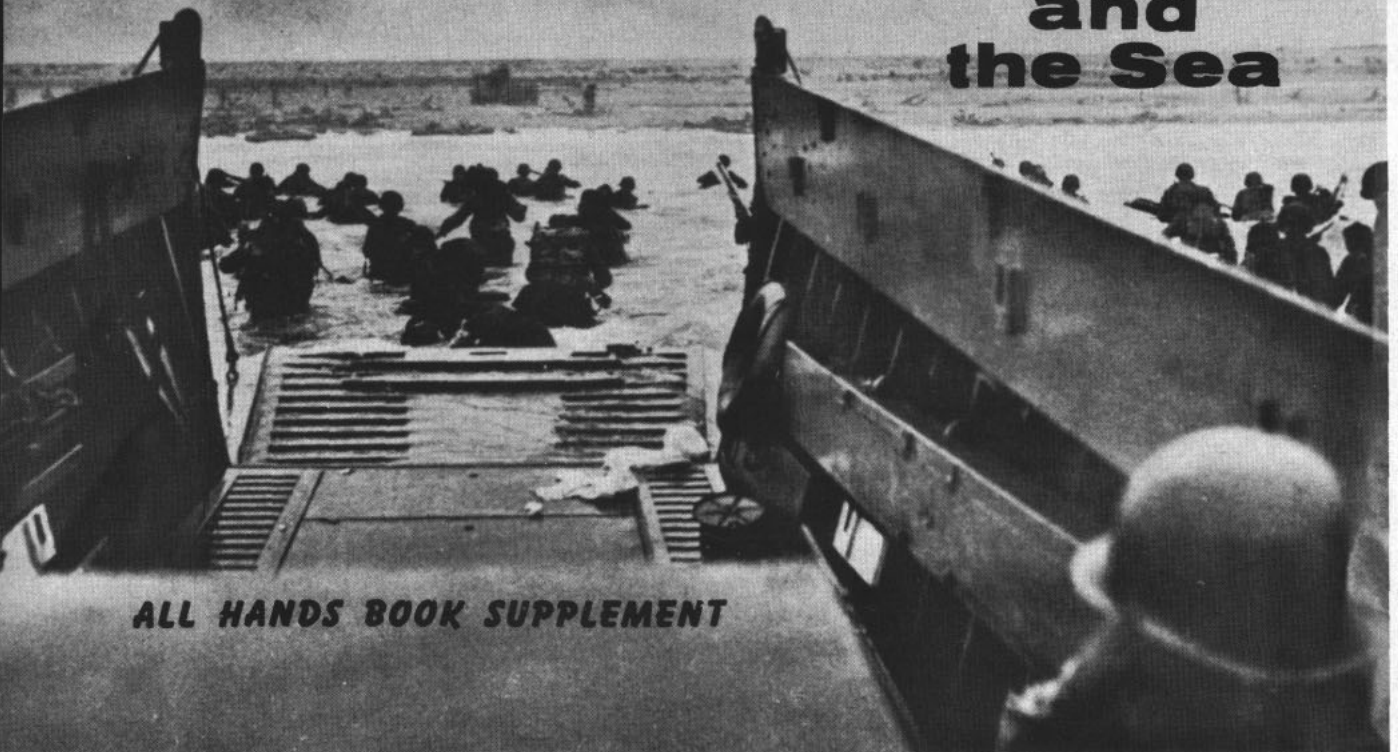
The Pass, by John Slimming, tells of the attempt of a handful of refugees who try to reach freedom from Red China through the mountains of northern Burma. An excellent adventure yarn, the story is told through the eyes of a photographer who, up to a point, is doing just a routine refugee story. But then, there's this girl. . . .

Youngblood Hawke, by Herman Wouk, needs no detailed description by readers of *The Caine Mutiny*. Anyway, it's about a tough and not entirely admirable character who hits the jackpot as a writer and has to fight off the penalties of success in New York, Hollywood and assorted locales. One crisis right after another.

These are only some of the books available at your ship or station library. They have been selected for review because we feel they are of wide interest.

AMPHIBS

Lords of the Land and the Sea



ALL HANDS BOOK SUPPLEMENT

Almost a lost art for many years, amphibious operations have since World War II increased in importance and flexibility. The Amphibious Forces, Atlantic and Pacific, have, within the 20 years since they were created, demonstrated that they are a mature, effective fighting force.

THE MAGNITUDE OF AMPHIBIOUS operations during World War II tends to create the impression that landing operations are a new type of military enterprise, particularly since, in modern times and until World War II, there have been few successful large-scale amphibious landings.

Nevertheless, the earliest account of amphibious warfare dates back nearly 3000 years. The Greeks, according to Homer's *Iliad*, were the first to use such techniques, attacking the city of Troy in Asia Minor near the Dardanelles. Crossing the Aegean Sea, they stormed the beaches near Troy and, after 10 years of struggle, destroyed the city.

The Persian king Darius launched a waterborne attack against the Greeks about 700 years later. It was in 490 B. C. that Darius constructed an especially designed amphibious fleet for an attack on Athens. His shipbuilders constructed a remote ancestor to the modern landing craft—a ship with a runway for horses. Darius was successful in his landing, but met defeat inland.

In 55 B. C., Julius Caesar landed two Roman legions north of the Thames River, which ultimately led to the defeat of the British. The success of his invasion resulted in the establishment of all southern England as a province of the Roman Empire. Since the Romans remained for four centuries, the results of this amphibious opera-

tion did much to influence the later course of English history.

It wasn't until the year 1066 when one of the most significant waterborne invasions of history took place. William the Conqueror crossed the English Channel to Britain with what was a sizable army for those days. At Hastings, he defeated the Saxon king Harold, and founded a new line of rulers.

Amphibious landings from 1066 to the American Revolution are too numerous to recite in detail, but it may be helpful to mention a few of the main operations.

An early invasion of Normandy occurred in July 1346 when the English invaded France. Almost 600 years later, history repeated itself.

The summer of 1588 saw the combined efforts of the English fleet and adverse weather conditions smash the Spanish Armada in its attempt to invade Great Britain.

In 1775, a party of U. S. Marines and Navymen conducted an amphibious landing at Nassau on New Providence Island in the Bahama Group.

FROM THAT DATE UNTIL 1941, U. S. Marines had participated in some 180 amphibious landings. Operations during this period included an assault on Vera Cruz in 1847 during our war with Mexico, and during the Civil War when some were spectacular successes and some were costly failures.

It was not until 1898, however, that the first large scale training in landing operations began. At that time,

Condensed and freely adapted from *The Amphibian*, Vol. 14, No. 3, and *The Gator*, 20 Feb 1962.

a battalion of Marines, consisting of five rifle companies and a battery of 3-inch artillery, was organized as a Fleet landing force. This organization underwent intensive training designed to improve rapid ship-to-shore movement and techniques in landing operations. The seizure of Guantanamo Bay was the first test of this specialized type of training.

The premiere of modern, large-scale landings came into being with World War I. The classic example of combined operations, conducted by the British during the Dardanelles campaign in 1915, represented an instance in modern times before World War II of an assault landing by a major force on a hostile and defended shore.

In the assault landings on the Gallipoli Peninsula (where the beaches were unopposed or lightly defended), troops landed with few or no losses; however, extremely heavy losses were suffered at strongly defended beachheads, although troops had successfully been placed ashore.

Nevertheless, in the following months, the land operations for the seizure of the Gallipoli Peninsula were unsuccessful. For a number of reasons, a secure beachhead was never established. While cooperation between troop and naval elements was excellent, the logistic buildup on the beaches was never adequate and communications remained primitive. The landing forces were finally evacuated in January 1916 after a disastrous campaign lasting eight months.

DURING THE 25 YEARS between Gallipoli and Guadalcanal, the United States developed the doctrine, organization, tactics and techniques necessary for success in this most difficult and complex type of warfare.

The period between 1936 and 1941 was one of application, test and experiment in the field of amphibious tactics. Organization, weapons and equipment were tested by the newly organized Fleet Marine Force and recommendations for further developments were placed under study.

It was not until 1941 that any serious training was undertaken toward the development of a technique for the landing of troops and equipment on open beaches. Amphibious warfare was so lightly regarded before that



AMPHIBIANS CHARGE the Rising Sun at Iwo Jima.

time that its training was assigned to the Atlantic Service Force as additional duty.

It was not until the attack on Pearl Harbor and our awakening to the fact that if we were to support our Allies with ground armies it must necessarily be done across open beaches that the inadequacy of our amphibious operations became evident.

Nevertheless, within a very short time (7 Aug 1942) the amphibious forces were in a position to land 11,000 Marines and their supplies on Guadalcanal in the face of the enemy.

AS AMPHIBIOUS LANDINGS generally followed a fixed pattern (with infinite variations dictated by local conditions), a brief description of this landing as set forth in Potter's *The United States and World Sea Power* might be useful in providing a picture of a typical operation:

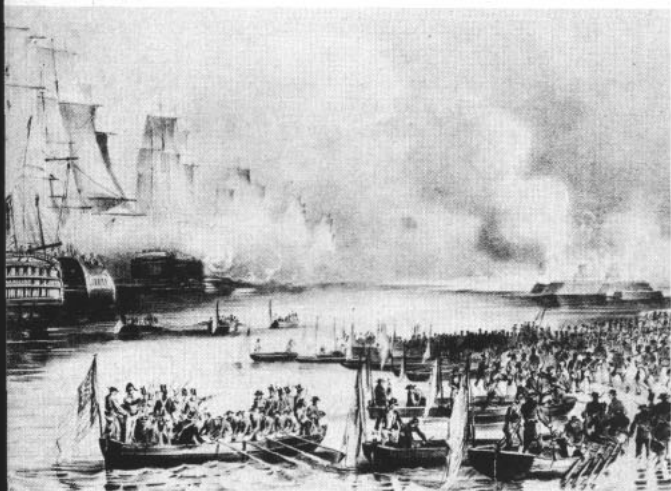
After a chaotic rehearsal of landing operations in the Fijis, the expeditionary fleet steamed westward into the Coral Sea—RADM R. K. Turner's Amphibious Force of transports carrying the 1st Marine Division, escorted by cruisers and destroyers; and a Support Force including the carriers *uss Saratoga* (CV 3), *Enterprise* (CV 6) and *Wasp* (CV 18) and their screening vessels. In the Coral Sea the fleet shaped course due north and headed for Guadalcanal.

Under a clearing sky in the early hours of August 7, the Carrier Force moved into position south of Guadalcanal while the Amphibious Force slipped up the west coast, split into two groups around little Savo Island and entered Ironbottom Sound.

In darkness shortly after 0600 fire support vessels of the south group began the bombardment of Guadalcanal, guns seeking out enemy shore batteries and dumps. Then came planes from the carriers to add to the destruction. With dawn just breaking over the scarcely ruffled sound, the convoy commander signaled "Land the landing force," and Higgins boats, ramp boats, and tank lighters began to hit the beach.

Loading completed, the boats advanced to the line of departure, marked by two destroyers 5000 yards from the beach. On signal for the run-in, the destroyers gave the Guadalcanal coast a final bombardment with their 5-inch guns and then lifted fire just before the first landing craft grounded.

By nightfall, the landing boats had put 11,000 Marines ashore and the beach was cluttered with great piles of supplies needed for support.



VERA CRUZ—12,000 men reached shore without loss.



IN EARLY DAYS before landing craft and amphibious tractors, troops practice landing from small boats.

MEANWHILE, ON THE ATLANTIC COAST, a flotilla composed in the main of merchant ships, manned by volunteers, Coast Guardsmen and merchant mariners, was being formed. Thus the Atlantic Fleet Amphibious Force embarked upon its initial assault—the invasion of North Africa.

According to tradition, just before embarkation, the late General George Patton said, "Never in its history has the Navy landed an Army at the planned time and place. If you land us within 50 miles of our objective and within one week of D-Day, we'll go ahead and win."

General Patton had no complaints on this occasion. The Navy not only landed his 37,000 troops and 250 tanks on schedule but, in most cases, hit the beach at the predetermined area.

The entry of the United States into the conflict in the European theater was begun through "Operation Torch." The purpose of this invasion was to secure African bases from which we might carry the war to Sicily, freeing Great Britain's lifeline to India, and opening a way for the invasion of Italy and southern France. It was also undertaken to relieve the critical situation in the Middle East, since it diverted some German pressure from the English Army.

The invasion of Sicily in July 1943 found a huge

D-DAY TASK FORCE—Part of a giant amphibious force moves across the English channel to France.



armada of more than 3000 vessels and 160,000 men landing on the beaches—an operation destined eventually to force Italy out of the war. Similar ship-to-shore landings on the mainland of Italy at Salerno were made in September of that year.

The invasion of Western Europe on 6 June 1944 took place over the beaches of Normandy. From 6 June to 27 July, 18 divisions or approximately 250,000 Allied troops were put ashore. In the first 28 days, some million men, 183,000 vehicles and 650,000 tons of supplies were deposited on the beachheads and in artificial harbors by a force of about 3000 craft and nearly 15,000 men.

The final major amphibious landing operation on the European continent was carried out in southern France in August 1944—an operation that aided in the ultimate defeat of Germany.

Amphibious operations in the Pacific did not halt with the invasion of Guadalcanal. In 1943, the completely reorganized PhibPac forces helped lead the U. S. along the long road back.

The Trobriand Islands were occupied and Rendova Island was invaded in a joint operation on 30 June. Rendova was crossed off the list 16 July.

The month of August witnessed the beginning of a series of strikes all through the Japanese-held areas of the Pacific. Backed by air forces and heavy surface craft support, the landing forces began to attack island after island in jumps ever closer to Japan.

Munda was overrun. Troops landed at Vella Lavella in the central Solomons. Kiska, in the Aleutians, was occupied by the Army.

Japanese outposts of Lae and Salamaua fell in September 1943, to combined Australian and U. S. troops. In November 1943, a three-way attack was made on the Gilbert Islands. Next was one of the bloodiest battles of the war—Tarawa—where more than 1000 lives were lost taking an island less than half the size of New York city.

Amphibians rang the curtain down on the year's end by putting Marines ashore at Arawe, and Cape Gloucester, New Britain.

In the first six months of 1944, Eniwetok in the Marshall islands was invaded and island after island was taken. Attention focused on the Marianas in June. Saipan was invaded. Guam was taken and Tinian fell.

The biggest landing in the Pacific up to that time took place 14 Oct 1944 at Leyte Gulf. The Philippines from Mindanao to Luzon were pounded from the air and carrier task forces hunted for the Japanese navy while the amphibious forces returned General MacArthur and his troops to the Philippines. On 8, 29 and 31 January a huge amphibious armada landed troops in the Luzon area. On 4 and 14 February, they landed at Mariveles, Luzon, and began to put pressure on Bataan. Corregidor was taken by a combined paratroop and amphibious operation 16 February.

On 18 February, the spotlight shifted to Iwo Jima which ultimately fell after long, bloody fighting.

As the Philippine campaign gained in intensity, a combined Army and Marine Corps invasion force prepared to attack the Japanese defenses on Okinawa. The Navy massed some 1400 ships for the attack. Okinawa became another stepping-stone to the Japanese mainland on 2 June.

Amphibious forces began to prepare for the final in-

vasion—that of Japan—but surrender came before it could be put into effect. World War II was over.

THE READJUSTMENT FOLLOWING the war brought many changes. By careful and strategic dispersal of ships and assault waves, the amphibious forces minimized their vulnerability to nuclear attack. Assault procedures were revamped. They increased the speed of the ship-to-shore movement; improved air and naval gunfire support; streamlined logistic phases, and improved antisubmarine warfare defense.

The most far-reaching development was the concept of vertical envelopment. Designed to land assault troops ashore by air, and operating from ships at sea, vertical envelopment was created to eliminate difficult beach conditions, to occupy strategic positions, and to harass the enemy so that a landing could be made without undue interference by the enemy.

But vertical envelopment was not introduced to take the place of the water-borne ship-to-shore movement, which is the backbone of any amphibious movement. With it, an extensive amount of troops and their heavy equipment are placed ashore to provide an assault thrust of such military strength that an enemy will literally submit to defeat.

Various phases of the Cold War put these new concepts into practice. The United Nations action in Korea began 30 June 1950, with units of the Pacific Amphibious Force participating. Following the invasion of Inchon, the evacuation of Hungnam began in December of that year, conducted primarily by PhibPac forces. An estimated 105,000 combat troops, 101,000 South Koreans, 17,500 vehicles and 350,000 tons of supplies were removed safely. The last ship out was the high speed transport *uss Begor* (APD 127), which stood by to remove UDT personnel who remained behind to destroy buildings and piers.

In February 1951, another invasion of Inchon was conducted. In April 1953, two PhibPac LSTs *uss 1090* and *1096* (later *uss Russell County*, now decommissioned, and *uss St. Clair County*) carried out a part of Operation Little Switch. This involved the transfer of sick and wounded North Korean and Chinese Communist prisoners from Koje-do and Cheju-do islands to Pusan, Korea.

The Passage to Freedom episode saw the exodus of

310,000 personnel, 70,000 tons of equipment and 8000 vehicles from North to South Vietnam when the Northern sector was about to be taken over by the Communists.

On 1 July 1955, all amphibious force tank landing ships were named for the first time. On that date, the names of counties and parishes of the United States were assigned to this type of ship.

On the Atlantic side, emergencies called for the assistance of the Amphibious Force in the evacuation of U. S. citizens and United Nations truce team members from the Gaza Strip in 1956. Two years later, in 1958, a crisis in Lebanon again emphasized the flexibility of the amphibians. On July of that year, amphibious ships in the Mediterranean were anchored in liberty ports, separated by as much as 1500 miles. Within three days, they had landed some 5000 Marines in Beirut.

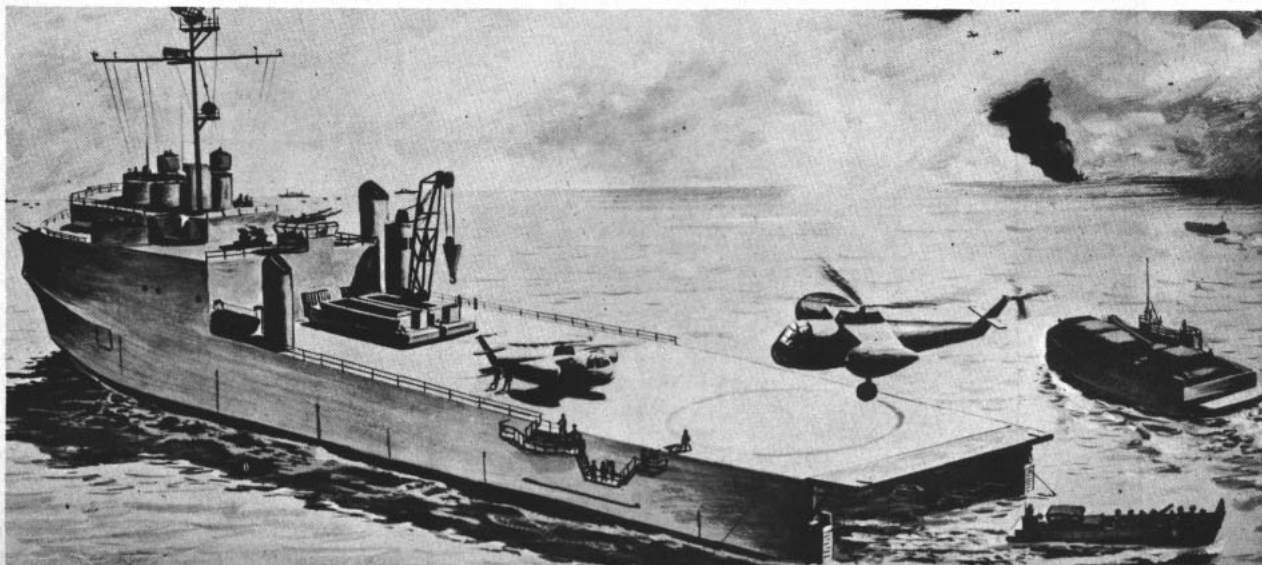
In 1960, the attack transport *uss Paul Revere* (APA 248) with the destroyers *uss Rowan* (DD 782) and *Gurke* (DD 783) recovered the nose cone of a missile designed to record nuclear emissions at various altitudes. Later that year, *uss Bexar* (APA 237) after embarking 1100 Indonesian troops and transporting them to the Congo, returned to San Diego via Panama, making the first round-the-world trip of a PhibPac ship for many years.

ANY MODERATELY ATTENTIVE reader will note that, as the years go by since World War II, the scale of operations of the amphibians has decreased. This is not to imply that the significance of these forces has shrunk correspondingly. On the contrary, on its 20th anniversary, the Amphibious Force remains an indispensable component of the Navy.

Dedicated to the belief that it can meet any challenge in the modern world, from small brush-fire wars to all-out nuclear war, the Amphibious Force remains in a state of constant readiness to move quickly to any area accessible by the world's oceans in carrying out the policies of the United States.

If the Amphibious Force can compare its history of successful waterborne assault with the invasion of Troy in Asia Minor nearly 3000 years ago, then it can regard with satisfaction the words of an outstanding historian: "The amphibious character of the Greeks had already been determined. They were to be lords of land and sea."

NEW CONSTRUCTION—The Amphibious Transport, Dock (LPD) will carry transport copters, landing craft and troops with assault equipment. This ship will eventually replace the APA and the AKA.



TAFFRAIL TALK

COIN COLLECTORS, we've found, are often prone to get fairly fanatical about their hobby—so much so that they'll go to almost any lengths to increase and enhance their collections. And Navy coin collectors, apparently, are no exception to the rule.

As a case in point, consider Personnelman Second Class Ronald C. Thomas of *uss Kitty Hawk* (CVA 63). When it came time to ship over aboard that guided missile aircraft carrier recently, rare-coin fancier Thomas did so in a perfectly normal fashion—until it came to collecting his reenlistment bonus. Then he asked for \$1000 of his loot in *dimes*.

Dimes, it develops, are not Thomas's only coin kick—just his latest one. In the years since he was first bitten by the collecting bug, he has built up complete Lincoln penny and Jefferson nickel collections. Now he plans to move onward to smaller things.

★ ★ ★

Not many sailors live in tents nowadays—but for 36 Navymen comprising six *Lorac* (Long Range Accuracy) communications monitoring teams along the East Coast from the Bahamas to Newfoundland, tent living is a way of life.

Each team consists of six technicians who operate from a portable 10-story signal tower, and generate their own power for the intricate electronic equipment they use. A team may spend anywhere from two weeks to four months at a site, depending upon its assigned mission.

These *Lorac* teams, we're told, are extremely efficient, and encounter no great difficulty in adapting to their nomadic existence. They also, apparently, become adept at living off the land.

At one northern campsite not so long ago, for example, a neighboring lobsterman was lamenting that his catch had dropped off dismally since his sonar went on the blink. In something less than a trice, the team's versatile technicians had the sonar rig back in working order again—and, says the crew's CPO-in-charge, "we haven't lacked for fresh lobster since."

★ ★ ★

Then, if you're still with us at this point, there is the little saga of Musician Third Class David J. Rydell of the attack aircraft carrier *uss Coral Sea* (CVA 43).

Back in October 1960, Rydell was serving in *uss Lexington* (CVA 16). One fine day, while steaming off the Pacific coast of Mexico en route to Pearl Harbor, he was seized with an unoriginal thought. Why not put a note in a bottle, throw it in the ocean, and see how it floats? He did just that—wrote his name, address, longitude and latitude on a piece of paper, sealed it inside an empty catchup bottle cadged from the galley, and heaved the lot off the fantail.

Months, then years passed. Musician Rydell forgot all about his impulsive act. Then one day earlier this year, he got a letter. It was from Ishikawa-Ken, Japan—and it began, "Dear Sirs: I picked out a letter in the bottle which you threw from overboard . . ."

Now he has a pen pal.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keystones of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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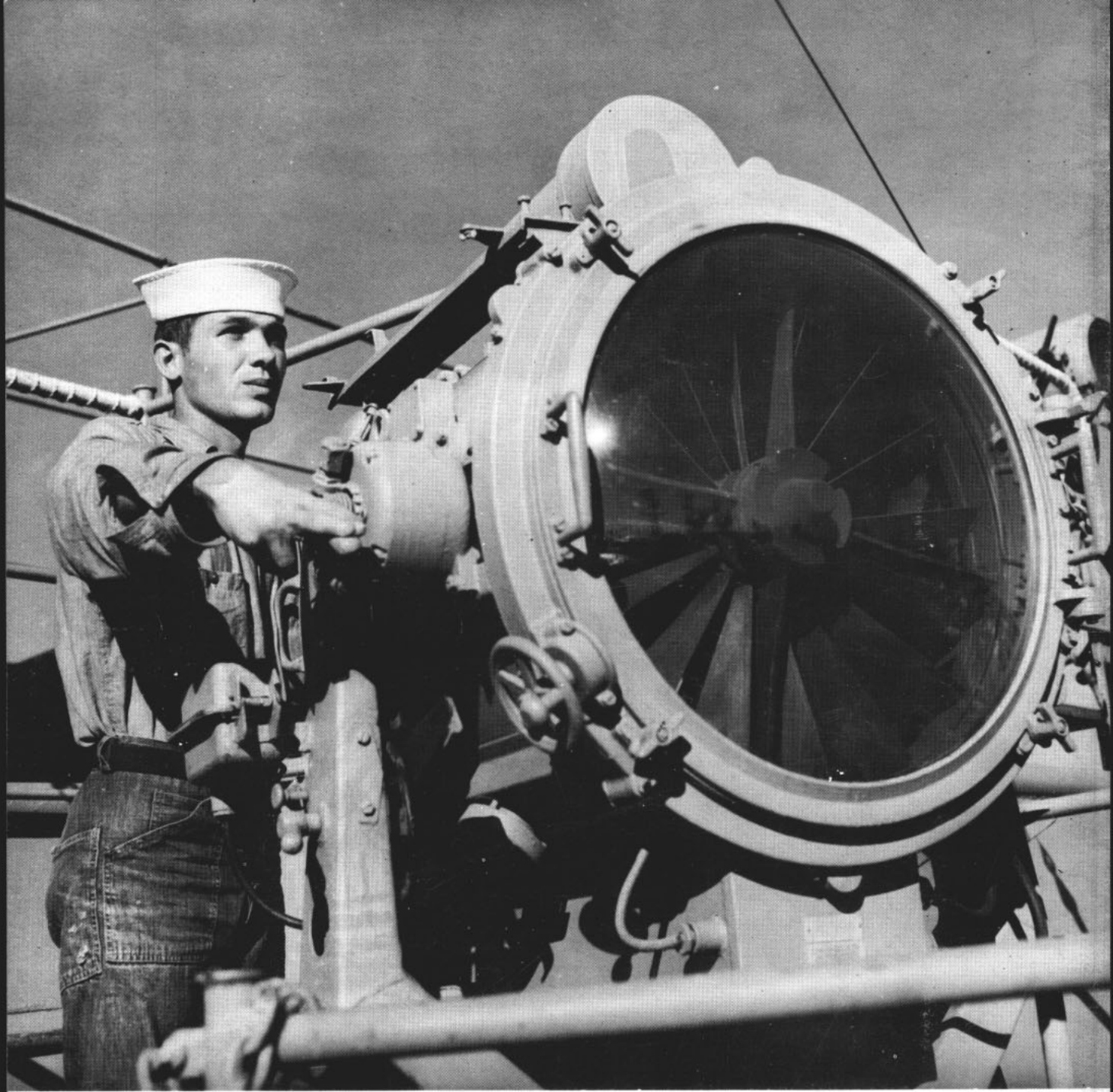
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• AT RIGHT: AMMO PASSERS—

The ammunition ship *USS Shasta* (AE 6) appears small while steaming alongside the nuclear-powered aircraft carrier *USS Enterprise* (CVAN 65) during a bomb loading exercise in the Atlantic.





the message reads...
NAVY ON THE BEAM